ORDER NO. MD9602002C1
A2

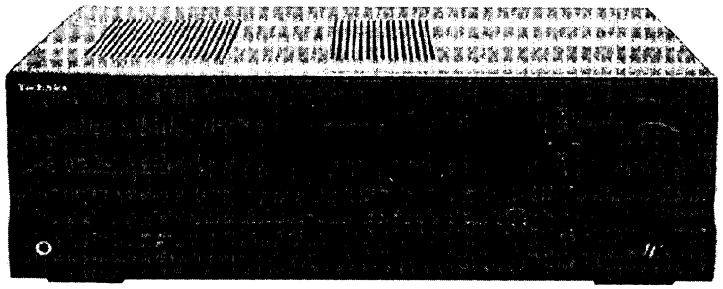
Service Manual

AV Control Stereo Receiver

Receiver

DOLBY SURROUND PRO • LOGIC *

SA-G76



Colour

(K) . . . . . Black Type

Area

Suffix for Model No.	Area	Colour
(PP)	U.S.A. and Canada	(K)

System No. : S175PC-K, S2700P-M, S2750P-K
(Refer to page 3)

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877.
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■ Specifications

■ FM Tuner Section

Frequency range	87.9 – 107.9 MHz
Sensitivity	11.2 dBf (2 µV, IHF '58)
50 dB quieting sensitivity	
MONO	18.3 dBf (4.5 µV, IHF '58)
STEREO	38.3 dBf (45 µV, IHF '58)
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	75 dB
STEREO	70 dB
Frequency response	20 Hz – 15 kHz, +1 dB, –2 dB
Alternate channel selectivity	65 dB
Capture ratio	1 dB
Image rejection at 98 MHz	44 dB
IF rejection at 98 MHz	80 dB
Spurious response rejection at 98 MHz	75 dB
AM suppression	50 dB
Stereo separation	
1 kHz	40 dB
10 kHz	30 dB
Carrier leak	
19 kHz	–35 dB
38 kHz	–50 dB
Antenna terminal(s)	75 Ω (unbalanced)

■ AM Tuner Section

Frequency range	530 – 1710 kHz
Sensitivity	20 µV, 330 µV/m
Selectivity	55 dB
Image rejection at 1000 kHz	40 dB
IF rejection at 1000 kHz	60 dB

■ Video Section

Output voltage at 1 V input (unbalanced)	1±0.1 Vp-p
Maximum input voltage	1.3 Vp-p
Input/output impedance	75 Ω

■ Amplifier Section

Rated minimum sine wave RMS power output	
40 Hz – 20 kHz both channels driven	
0.9% total harmonic distortion	110 W per channel (8 Ω)
1 kHz continuous power output both channels driven	
0.9% total harmonic distortion	115 W per channel (8 Ω)
Total harmonic distortion	
Rated power at 40 Hz – 20 kHz	0.9% (8 Ω)
Half power at 1 kHz	0.05% (8 Ω)
Power output at the Dolby Pro Logic operation	
0.9% at 1 kHz,	
Front	2 x 100 W (8 Ω)
Center	100 W (8 Ω)
Surround	100 W (8 Ω)
	(Surround speakers' total impedance)
SMPTE intermodulation distortion	0.9% (8 Ω)
Dynamic headroom	2dB (8 Ω)
Low frequency damping factor	30 (8 Ω)
Load impedance	
Front	8 Ω
Center	8 Ω
Surround	4 ~ 8 Ω
Input sensitivity	
PHONO	0.3 mV (3 mV, IHF '66)
CD, TAPE MONITOR, VCR 1, TV/VCR 2	18 mV (200 mV, IHF '66)
Input impedance	
PHONO	47 kΩ
CD, TAPE MONITOR, VCR 1, TV/VCR 2	22 kΩ

Technics®

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

S/N (IHF A)	
PHONO	70 dB (80 dB, IHF '66)
CD, TAPE MONITOR, VCR 1, TV/VCR 2	75 dB (85 dB, IHF '66)
Frequency response	
PHONO	RIAA standard curve ±0.8 dB
CD, TAPE MONITOR, VCR 1, TV/VCR 2	10 Hz – 60 kHz, ±3 dB
Tone controls	
BASS	50 Hz, +10 dB to –10 dB
TREBLE	20 kHz, +10 dB to –10 dB
Super bass	80 Hz, +7 dB

■ General

Power consumption	270 W, 350 VA
Power supply	AC 120 V, 60 Hz
Dimensions (W x H x D)	430 x 153 x 360 mm ($16\,^{15}/_{16}$" x $6\,^{1}/_{32}$" x $14\,^{11}/_{64}$")
Weight	9.5 kg (20.9 lb.)

Notes :
1. Specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

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■ Safety Precautions (This "Safety Precaution" is applied only in U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• Insulation Resistance Test

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumper AC plug and each exposed metal cabinet part, such as screwheads, antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts*. (Fig. 1) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. 2)
   *Note : Some exposed parts may be isolated from the chassis by design. These will read infinity.
4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

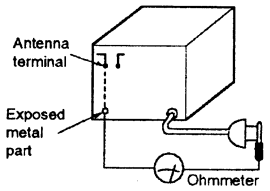


Fig. 1

Resistance = 3MΩ – 5.2MΩ

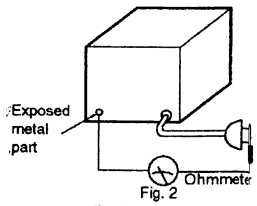


Fig. 2

Resistance = Approx ∞

■ Before Repair and Adjustment

Disconnect AC power, discharge both Power Supply Capacitors (C703 to C706) through a 10Ω , 5W resistor to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at 120V, 60 Hz in NO SIGNAL mode should be 400 ~ 1000 mA.

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

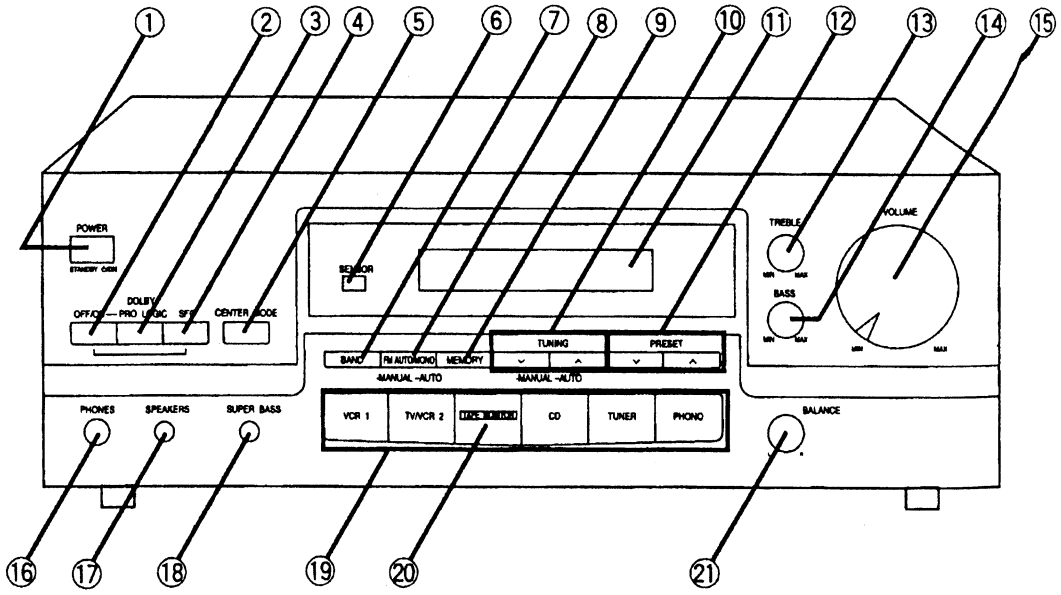
Note:
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ Line-up of Components

System name	Unit		
S175PC-K	SA-G76PP-K	:	Receiver (Made in MAV)
	SD-S917PC-K	:	Electronics block (Made in MESA)
	RS-TR180PP-K	:	Cassette deck (Made in MESA)
	SL-MC59PP-K	:	CD changer (Made in MESA)
	SH-WA17PC-K	:	Accessories box (Made in MESA)
	—	:	Speaker block
	—	:	Center speaker
	—	:	Surround speaker
	SB-A27PP-K	:	Front speaker (Made in MEP)
	SH-KS27PC-K	:	Rack (Made in MEP)
S2700P-M	SA-G76PP-K	:	Receiver (Made in MAV)
	SD-S927P-K	:	Electronics block (Made in MESA)
	RS-TR180PP-K	:	Cassette deck (Made in MESA)
	SL-MC59PP-K	:	CD changer (Made in MESA)
	SH-WA27P-K	:	Accessories box (Made in MESA)
	SB-AD370P-M	:	Speaker block (Made in MEP)
	SB-C937P-M	:	Center speaker (Made in MEP)
	SB-S937P-M	:	Surround speaker (Made in MEP)
	SB-A27P-M	:	Front speaker (Made in MEP)
	SH-KS27P-M	:	Rack (Made in MEP)
S2750P-K	SA-G76PP-K	:	Receiver (Made in MAV)
	SD-S927P-K	:	Electronics block (Made in MESA)
	RS-TR180PP-K	:	Cassette deck (Made in MESA)
	SL-MC59PP-K	:	CD changer (Made in MESA)
	SH-WA27P-K	:	Accessories box (Made in MESA)
	SB-AD370P-K	:	Speaker block (Made in MEP)
	SB-C937PP-K	:	Center speaker (Made in MEP)
	SB-S937PP-K	:	Surround speaker (Made in MEP)
	SB-A27PP-K	:	Front speaker (Made in MEP)
	SH-KS27P-K	:	Rack (Made in MEP)

■ Front Panel Controls

No.	Name
①	**Power "STANDBY ⏻/ON" switch (POWER, STANDBY ⏻/ON)** Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
②	**DOLBY PRO LOGIC, SFC OFF/ON button (OFF/ON)**
③	**DOLBY PRO LOGIC select button (DOLBY PRO LOGIC)**
④	**Sound field control select button (SFC)**
⑤	**Center mode select button (CENTER MODE)**
⑥	**Remote control signal sensor (SENSOR)**
⑦	**Band select button (BAND)**
⑧	**FM mode select button (FM AUTO/MONO)**
⑨	**Memory button (MEMORY)**
⑩	**Tuning buttons (TUNING)**
⑪	**Display**
⑫	**Preset channel buttons (PRESET)**
⑬	**Treble control (TREBLE)**
⑭	**Bass control (BASS)**
⑮	**Volume control (VOLUME)**
⑯	**Headphone jack (PHONES)**
⑰	**Speaker ON/OFF button (SPEAKERS)**
⑱	**Super bass ON/OFF button (SUPER BASS)**
⑲	**Input select buttons**
⑳	**Tape monitor button (TAPE MONITOR)**
㉑	**Balance control (BALANCE)**



■ Operation Checks and Main Component Replacement Procedures

"ATTENTION SERVICER" Some chassis components may have shape edges.
Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**

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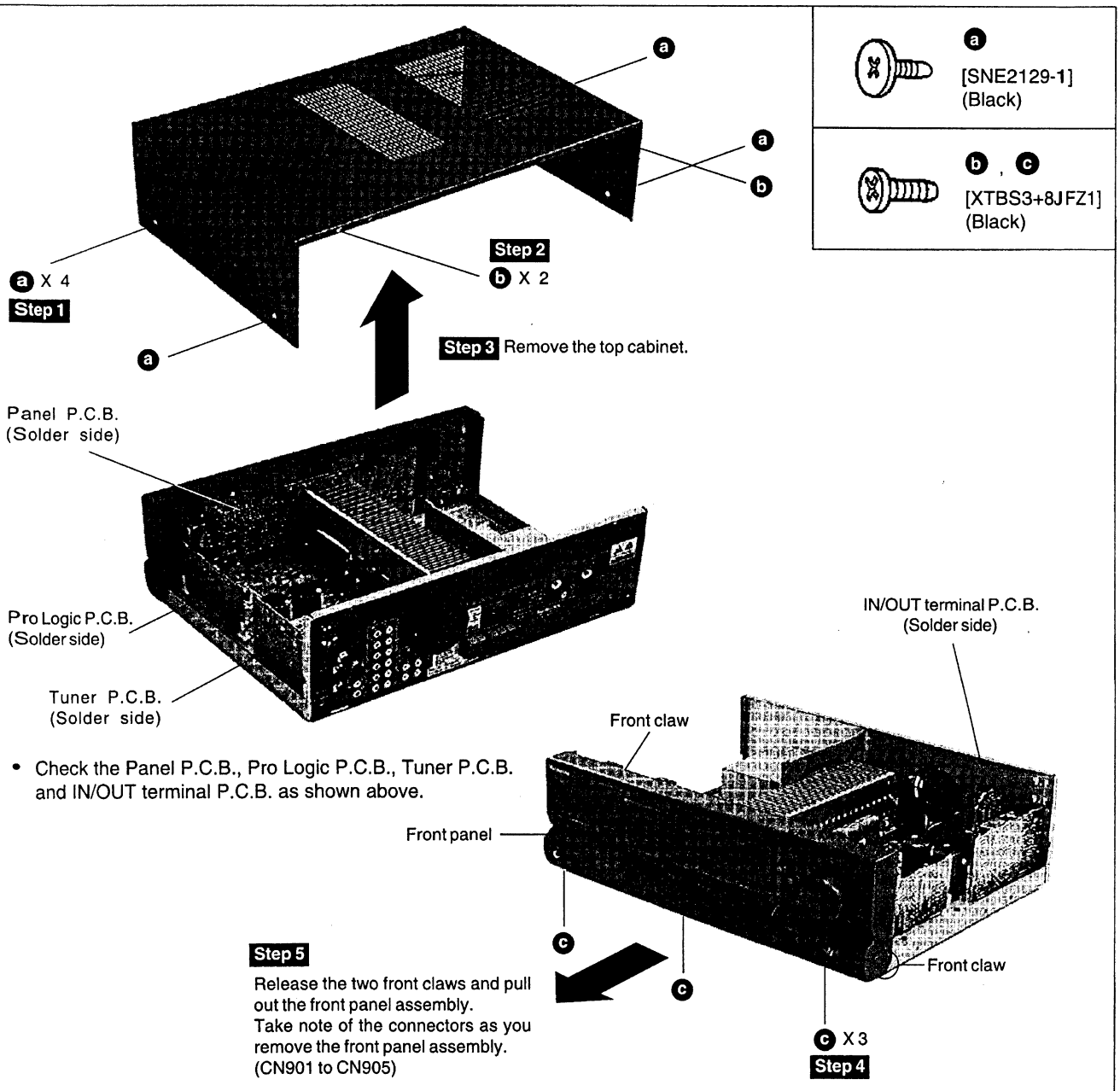
page

- **Checking Procedure for Major P.C.B.** ..... 4 ~ 5
- **Replacement of Power IC and Regulator Transistor** ..... 6 ~ 7

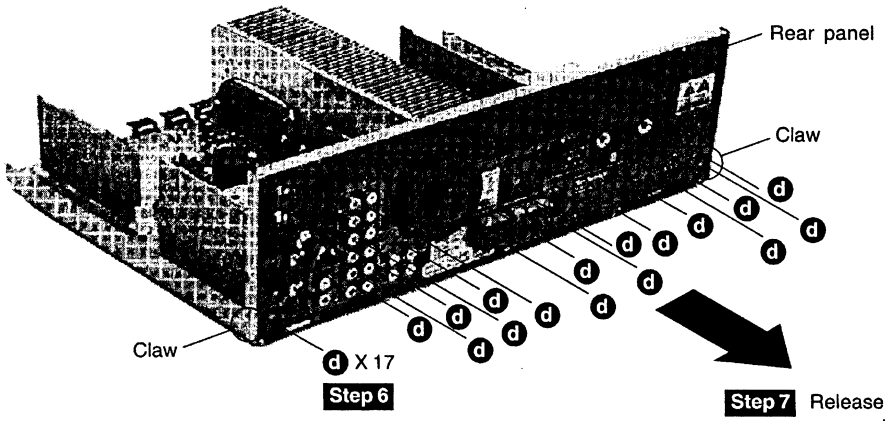
■ Checking Procedure for Major P.C.B.



- Check the Panel P.C.B., Pro Logic P.C.B., Tuner P.C.B. and IN/OUT terminal P.C.B. as shown above.

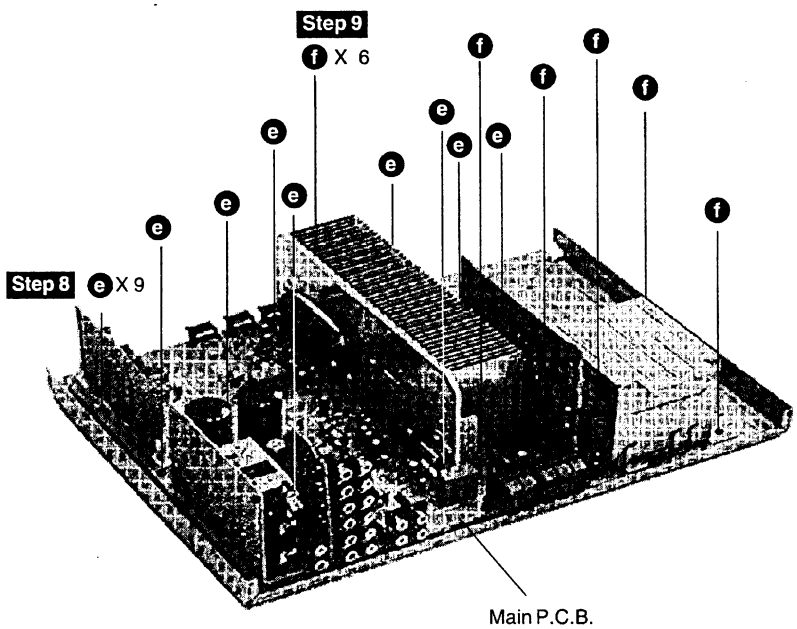
Step 5

Release the two front claws and pull out the front panel assembly.
Take note of the connectors as you remove the front panel assembly.
(CN901 to CN905)



Step 6

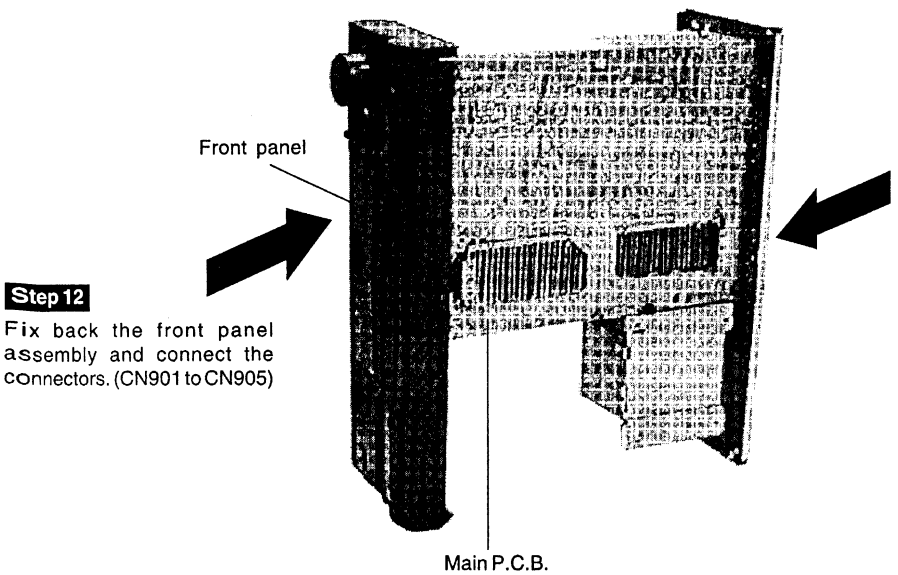
Step 7 Release the claws and then remove the rear panel.



Step 10 Remove the main P.C.B.

Step 13

Connect back the transformer to the power P.C.B. and Check the Main P.C.B. as shown on the left.

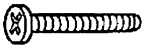
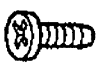


Step 11

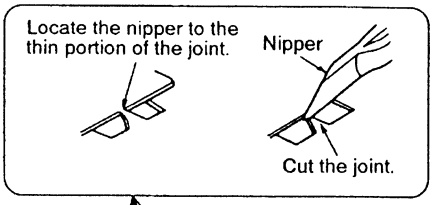
Install the rear panel temporarily on the main P.C.B. again.

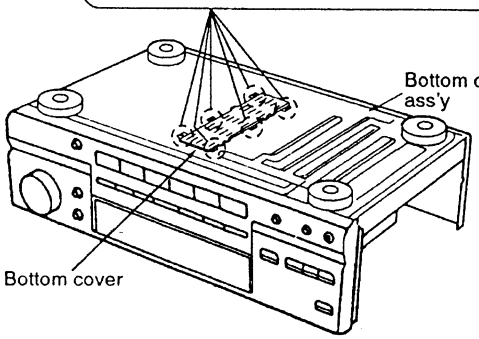
Step 12

Fix back the front panel assembly and connect the connectors. (CN901 to CN905)

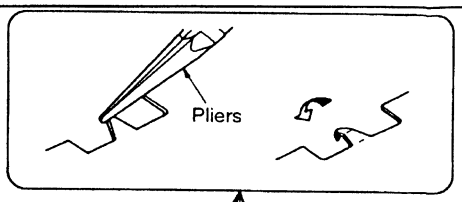
	d [XTBS3+8JFZ 1] (Black)
	e [XTB3+20JFZ] (Black)
	f [XTB3+8FF] (Black)

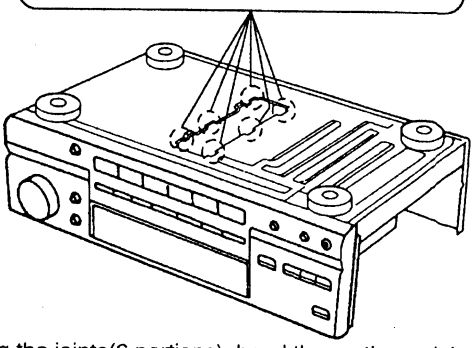
■ Replacement of Power IC and Regulator Transistor





1. Cut the joints(6 portions) between bottom cover and bottom chassis ass'y with nipper.

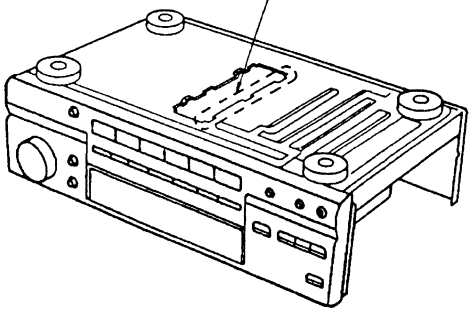




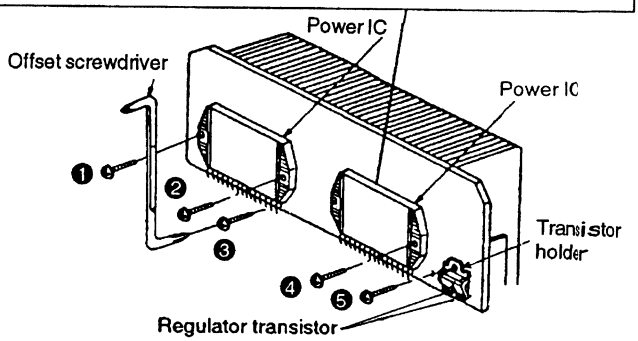
2. After cutting the joints(6 portions), bend the portions of the bottom chassis ass'y in the direction of arrow with pliers.

——— CAUTION ———

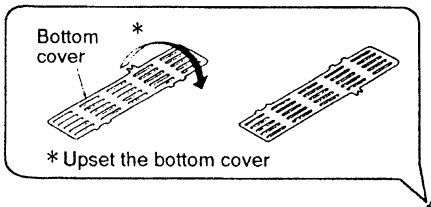
- After replacing the power IC or regulator transistor, apply a sufficient quantity of compound grease (RFKX0002) between the heat sink and the power IC or regulator transistor. (Radiation of power IC & transistor)
- Tighten enough the screws (❶ ~ ❺)after replacing the power IC or regulator transistor. Otherwise, the heat radiation works little.

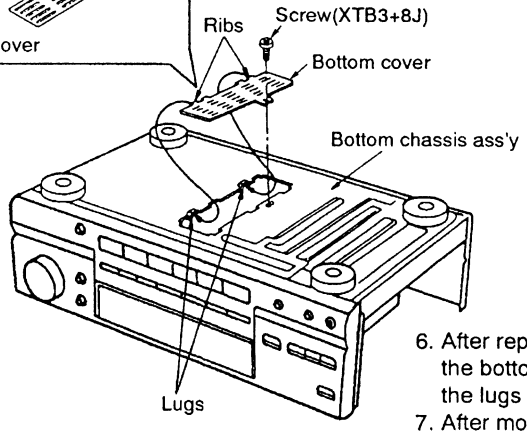


3. When replacing the power IC or regulator transistor, unsolder the terminals of power IC or regulator transistor on the soldered surface.



4. Then remove the 3 screws(❶ ~ ❺)fixed to the power IC or transistor holder.
5. When installing or removing the power IC or transistor holder, be sure to use an offset screwdriver.

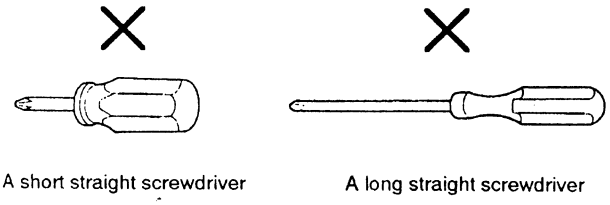




6. After replacing the power IC or regulator transistor, upset the bottom cover and align the ribs of the bottom cover to the lugs on the bottom chassis ass'y.
7. After mounting the bottom cover on the bottom chassis ass'y, fix it with a screw(XTB3+8J).

CAUTION:

1. A long straight screwdriver cannot be used for removal or mounting since its long grip interferes with the neighboring P.C.B.(See Fig.1)
2. A short straight screwdriver may be used for removal, but cannot be used for mounting because the limited space in the unit will not allow sufficient tightening torque. (See Fig.2)



A short straight screwdriver　　A long straight screwdriver

Fig.2

3. Insufficient tightening will cause poor heat dissipation from the power IC and regulator transistor and, in the worst case, may lead their thermal breakdown. (See Fig.2)

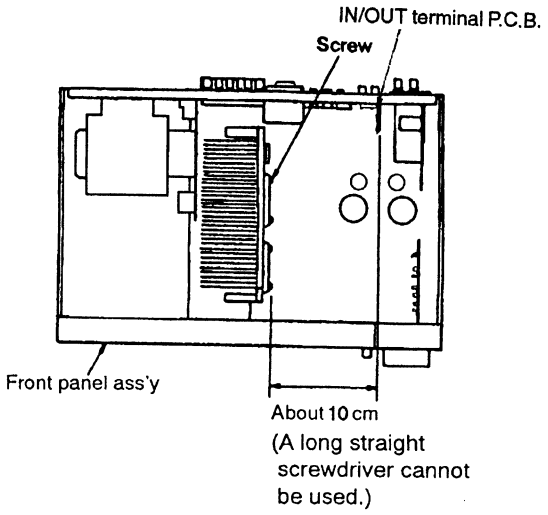
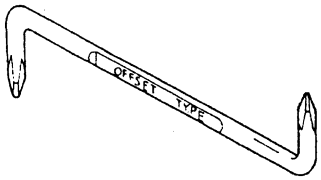


Fig.1

——OFFSET SCREWDRIVER——

• The PROTO offset screwdriver No.34-¼ is recommended for use in the application above.



No.	⊕	⊢ L ⊣
34¼	1 & 2	4¾"

• The address of PROTO International Sales is as follows.

Internatiotal Sales

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Bracknell Berkshire
RG 12 1A2
England
Fax: 44-344-485-528
Phone: 44-344-51813

■ Fan Motor Troubleshooting

The Model SA-G76 employ fan motor error sensing electronics.
If the cooling fan is not operating and "OVER LOAD" is displayed on the FL display, check the fan motor and its driving circuit.

"OVER LOAD" is displayed on the FL display.

Is the air cooling path blocked or the fan motorjammed by any external obstacle?

YES → Remove the obstacle.

NO

Remove the fan from the unit.

Is the fan motor's DC resistance 20 ~ 30 Ω ?

NO → Fan motor failure
Short circuit : DC resistance below 5 Ω
Open circuit : DC resistance over 1kΩ

YES

Reinstall the fan on the unit.

Are the terminal voltage of Q772 and Q773 normal in both and inactive states of the fan motor? (see table1.)

NO → Check the integrity of Q771, Q772, Q773 and the fan motor driving circuit. (see fig.1)

YES

(Voltage table)

		fan. off	fan. on
Q771	E	0V	0V
	C	−0.7V	0V
	B	0V	−0.7V
Q772	E	0V	0V
	C	0V	−9.1V
	B	−0.7V	0V
Q773	E	0V	−8.0V
	C	−14.8V	−14.8V
	B	0V	−8.5V

(Table 1)

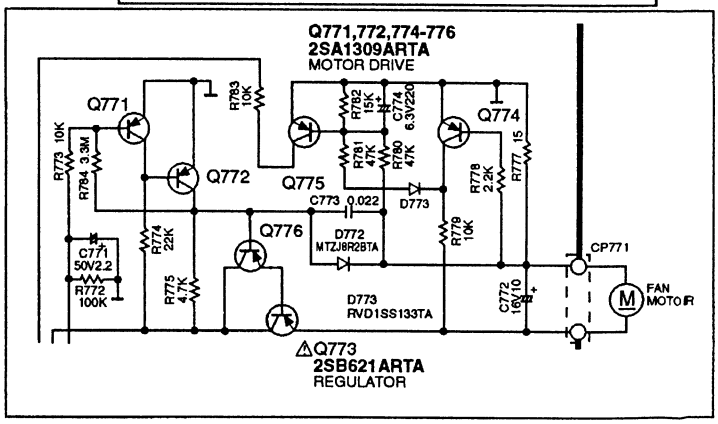


fig.1

Is an audio signal present at pins⑦ and ⑩ of IC601 or pins ⑦ and ⑩ of IC602

NO → The power IC (IC601 or IC602) is defective.

YES

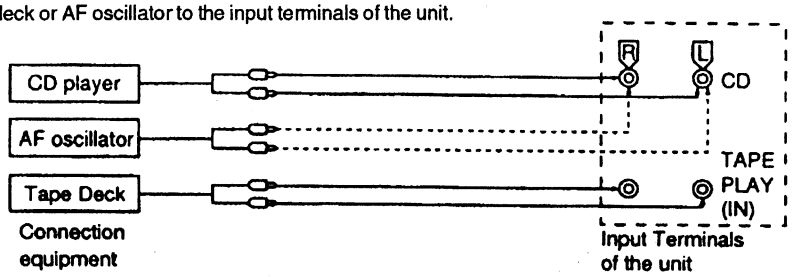
The fan motor, power ICs and fan driver are functioning normally.

■ Troubleshooting

This unit has test points on each circuit board block for use in troubleshooting.

CONNECTION

Connect either a CD player, tape deck or AF oscillator to the input terminals of the unit.



REQUIRED ITEMS

1. Testing with a CD player ——— Test deck (SZZP1054C / first program, 1kHz, 0dB)
2. Testing with a tape deck ——— Test tape (QZZCLA / 315Hz, 0dB)
3. Testing with a AF oscillator ——— Set the output at 500Hz, 200mV
4. Oscilloscope (min. 10MHz) ---------- To measure the output waveform at the test points.

TEST PROCEDURE FOR AMPLIFIER CIRCUIT

When the CD player AF oscillator is connected:

Power on the unit.
Set the input selector button of the unit to the "CD" position.
Set the Speaker ON/OFF button of the unit to the "SPEAKERS" position.

Run the CD player (SZZP1054C / first program 1kHz, 0dB) or Run the AF oscillator (Oscillator output at 500Hz, 200mV)

When the tape deck is connected:

Power on the unit.
Set the input selector button of the unit to the "TAPE MONITOR" position.
Set the Speaker ON/OFF button of the unit to the "SPEAKERS" position.

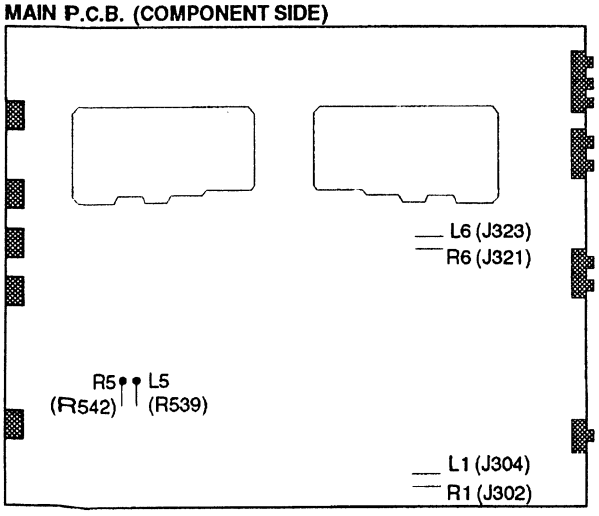
Run the tape deck (QZZCLA 315Hz, 0dB)

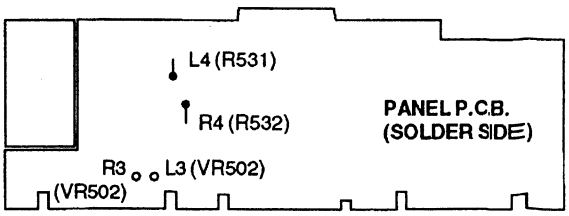
Using the Oscilloscope, check the output waveforms at the test points on the circuit boards of the unit in the following order:
(L1,R1) → (L2,R2) → (L3,R3) → (L4,R4) → (L5,R5) → (L6,R6).
Refer to page 10.

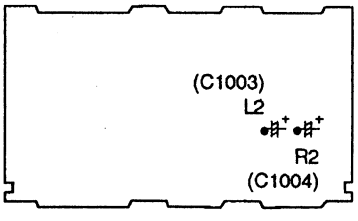
Note: Connect the ⊕ probe of the oscilloscope to each test point and the ⊖ probe to chassis ground.

TEST POINTS POSITIONS OF AMPLIFIER CIRCUIT

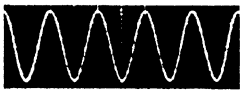
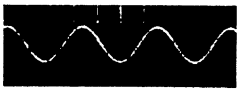
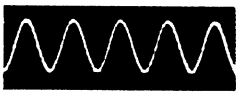
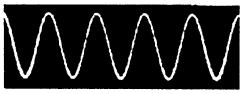
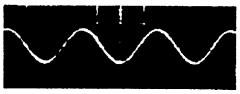
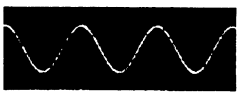
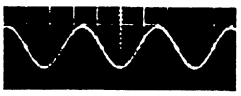
MAIN P.C.B. (COMPONENT SIDE)







NORMAL WAVEFORMS OF AMPLIFIER CIRCUIT AND LIKELY FAULTY BLOCKS

TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
L1/R1	 0.5 msec 2 V	 1 msec 500 mV	 1 msec 500 mV	Input selector block IC402 & area
L2/R2	 0.5 msec 2 V	 1 msec 500 mV	1 msec 500 mV	Dolby pro logic block IC1001, IC1002 & area
L3/R3	0.5 msec 500 mV	1 msec 50 mV	1 msec 100 mV	Master volume block VR501 & area
L4/R4	0.5 msec 500 mV	 1 msec 1 V	1 msec 1 V	Tone control block IC511 & area
L5/R5	0.5 msec 100 mV*	 1 msec 500 mV	1 msec 500 mV	Power limiter block Q581 to Q584 & area
L6/R6	0.5 msec 5 V*	1 msec 10 V	1 msec 10 V	Main amplifier block IC601 & area

Measurement conditions. Volume control (VR501), Treble control (VR512) and Bass control (VR511) positions : ⏱
*Volume control position (VR501) for these test : ⏲

CHECKING PROCEDURE FOR SURROUND CIRCUIT

Outputting surround signals normally requires that opposite phase signals be applied to both the left and right channels. However, this unit incorporates a service mode, allowing the surround circuit to be tested using in-phase signals.

When the CD player AF oscillator is connected:

Power on the unit.
Set the input selector button of the unit to the "CD" position.

↓

While pressing both the VCR1 button and Speakers button, press the "Power" button.

↓

The letters "SURROUND" flash on the FL display.

↓

Run the CD player (SZZP1054C/first program 1 kHz, 0dB) or Run the AF oscillator (Oscillator output at 500 Hz, 200mV)

When the tape deck is connected:

Power on the unit.
Set the input selector button of the unit to the "TAPE MONITOR" position.

↓

While pressing both the VCR1 button and Speakers button, press the "Power" button.

↓

The letters "SURROUND" flash on the FL display.

↓

Run the tape deck (QZZCLA 315 Hz, 0dB)

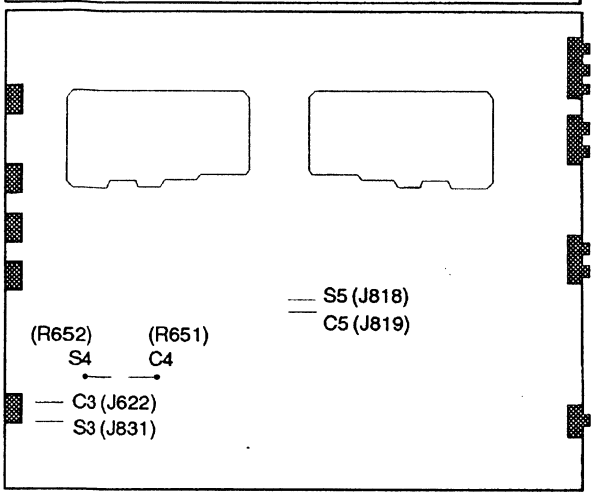
↓

Using the Oscilloscope, check the output waveforms at the test points on the circuit boards of the unit in the following order:
(C1,S1) → (C2,S2) → (C3,S3) → (C4,S4) → (C5,S5).

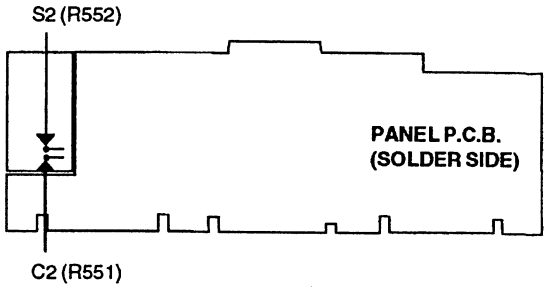
Note: Connect the ⊕ probe of the oscilloscope to each test point and the ⊖ probe to chassis ground.

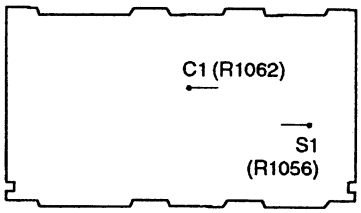
• To Exit the service mode, power off the unit.

TEST POINTS POSITIONS OF SURROUND CIRCUIT



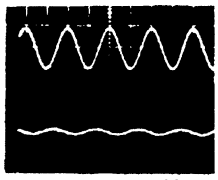
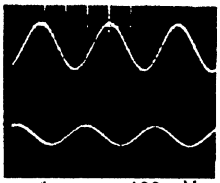
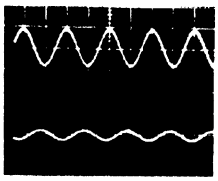
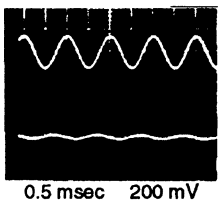
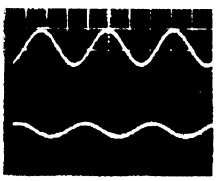
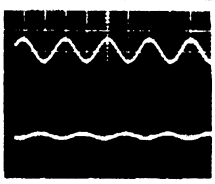
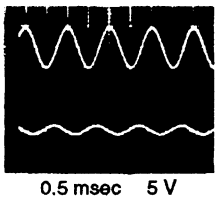
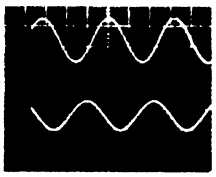
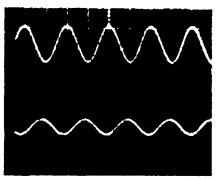
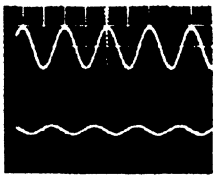
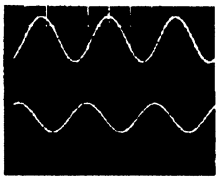
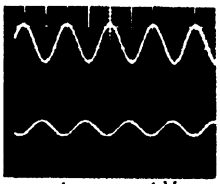
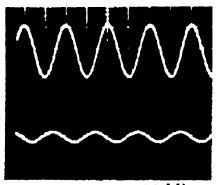
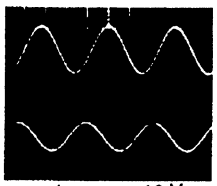
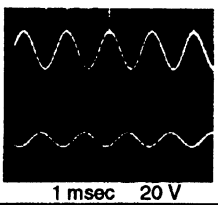
MAIN P.C.B. (COMPONENT SIDE)





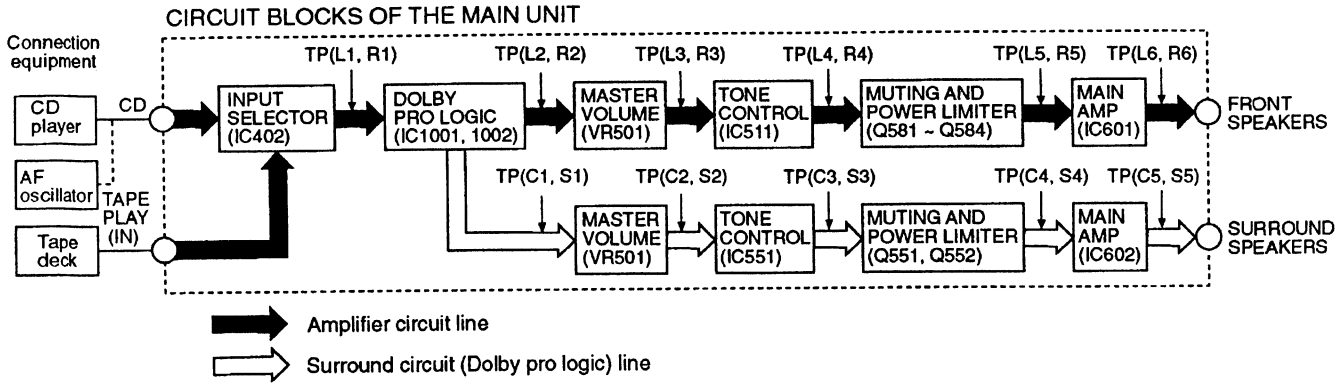
PRO LOGIC P.C.B.
(COMPONENT SIDE)

NORMAL WAVEFORMS OF SURROUND CIRCUIT AND LIKELY FAULTY BLOCKS

TP	CD player	Tape deck	AF oscillator	Likely faulty block if the normal waveform shown at the left is not present.
C1 S1	 0.5 msec 1 V	 1 msec 100 mV	 1 msec 200 mV	Dolby pro logic block IC1001, IC1002 & area
C2 S2	 0.5 msec 200 mV	 1 msec 20 mV	 1 msec 50 mV	Master volume block VR501 & area
C3 S3	 0.5 msec 5 V	 1 msec 500 mV	 1 msec 1 V	Tone control block IC551 & area
C4 S4	 0.5 msec 5 V	 1 msec 10 V	 1 msec 1 V	Power limiter block through Q551, Q552 & area
C5 S5	 0.5 msec 10 V*	 1 msec 10 V	 1 msec 20 V	Main amplifier block IC602 & area

Measurement conditions. Volume control (VR501), Treble control (VR512) and Bass control (VR511) positions : ↻
*Volume control position (VR501) for these test : ↺

CIRCUIT BLOCKS



■ OVERLOAD DETECTION FUNCTION

The HIC protection circuit functions if any cord at a speaker terminal is short-circuited or if the unit overheats because of improper operation. At the same time, 『OVERLOAD』 scrolls across the FL display.
In this state, all keys remain inoperative; if any key is pressed, 『SWITCH OFF POWER』 scrolls across the FL display.
If an overload occurs, immediately power off the unit and check the speaker connections, venting holes and cooling fans. After fixing any faults, power on the unit again and check for proper operation.
If no detects are found, or if the unit remains overloaded after it is power on again, check the circuit for faults.

■ Terminal Function of ICs

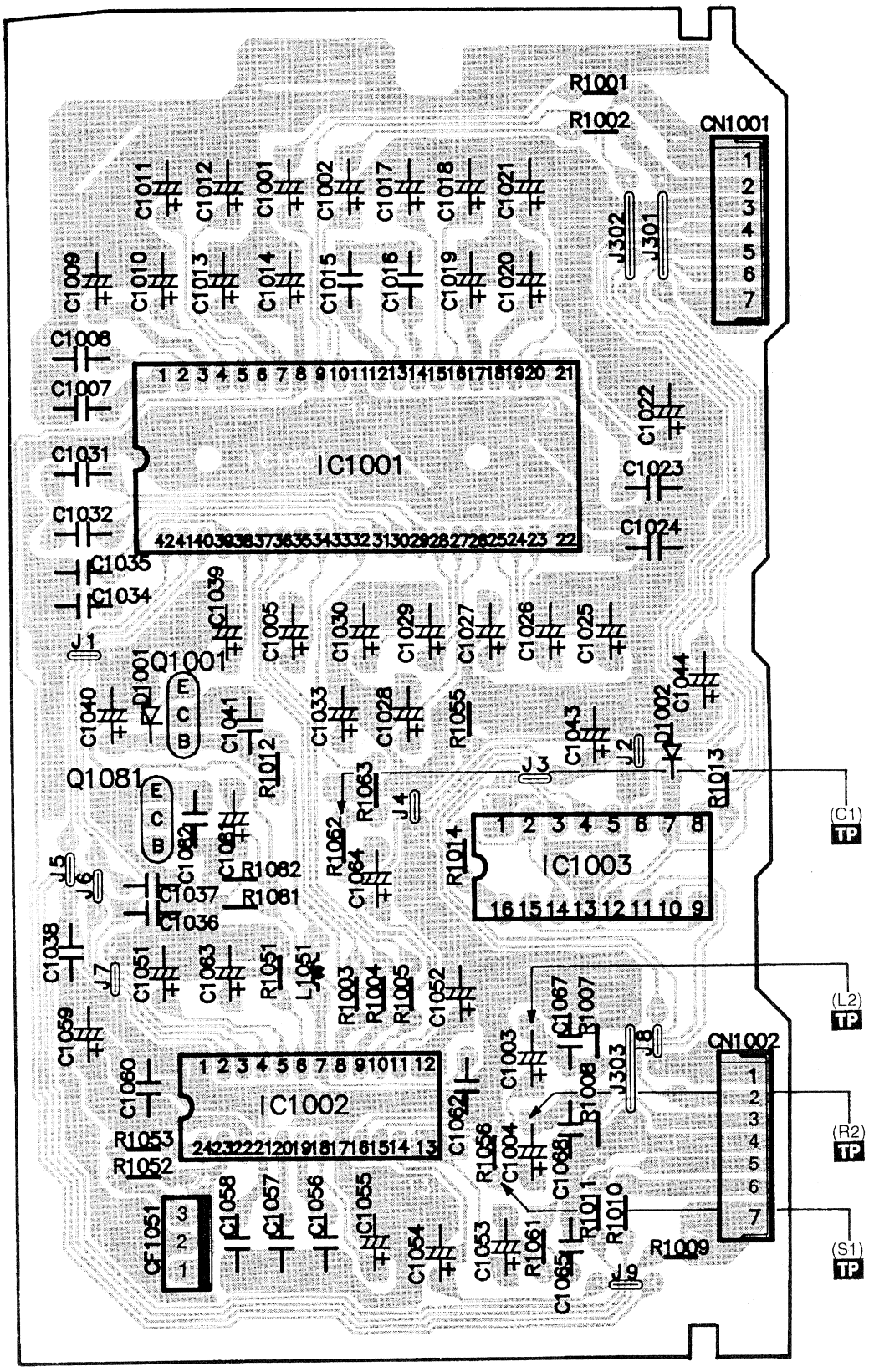
• IC901 (UPD78043A041) System Microprocessor

Pin No.	Mark	I/O	Function
1~7	D4~D10	O	Digit signal of FL display
8	VDD	I	Power supply terminal
9	SUR/OSD_CK	O	Serial clock signal
10	SUR/OSD_DT	O	Serial data signal
11	VIDEO_DET	–	Not used
12	SUR_CE	O	Chip enable signal
13	VOL_UP	O	Rotate control terminal of
14	VOL_DWN	O	volume motor
15	LOUDNESS	–	Not used
16	FM_STEREO	I	Stereo signal detect terminal
17	RESET	I	Reset detect terminal
18	SD	I	Received signal detect terminal
19	OSD_ST	–	Not used
20	GND	–	GND terminal
21	VIDEO_B	O	Video selector control terminal
22	VIDEO_A	O	
23	IF_DATA	I	Serial data signal
24	THERMAL	O	Mute control terminal
25~28	KEY1~KEY4	I	Key matrix detect terminal
29	AVDD	I	Power supply terminal
30	AVREF	I	Power supply terminal
31	OVERLOAD	I	Over load detect terminal
32	XT2	–	Not used
33	GND	–	GND terminal
34	XIN	I	Crystal oscillator terminal
35	XOUT	O	(4MHz)

Pin No.	Mark	I/O	Function
36~40	SFC1~SFC5	–	Not used
41	TNR_CE	O	Chip enable signal
42	SEL/TNR_DT	O	Serial data signal
43	SEL/TNR_CK	O	Serial clock signal
44	TV/VCR2	–	Not used
45	SUPER BASS	O	Super bass control terminal
46	HOLD	I	Hold signal input terminal
47	REMOTE	I	Remote control terminal
48	GND	–	GND terminal
49	SEL_ST	O	Level shift control terminal
50	HELP_LED	–	Not used
51	STANDBY_LED	–	Not used
52	VDD	I	Power supply terminal
53	REC_MUTE	–	Not used
54	S/C_SP	O	Surround/center speaker select control terminal
55	SP_B	–	Not used
56	SP_A	O	Speaker select control terminal
57	POWER_RLY	O	Relay control terminal
58	AF_MUTE	O	Muting control terminal
59	LIMITTER	–	Not used
60	INIT_IN	–	Not used, connect to resistor
61~70	S16~S7	O	Segment signal of FL display
71	VLOAD	I	Power supply terminal
72~77	S6~S1	O	Segment signal of FL display
78~80	D1~D3	O	Digit signal of FL display

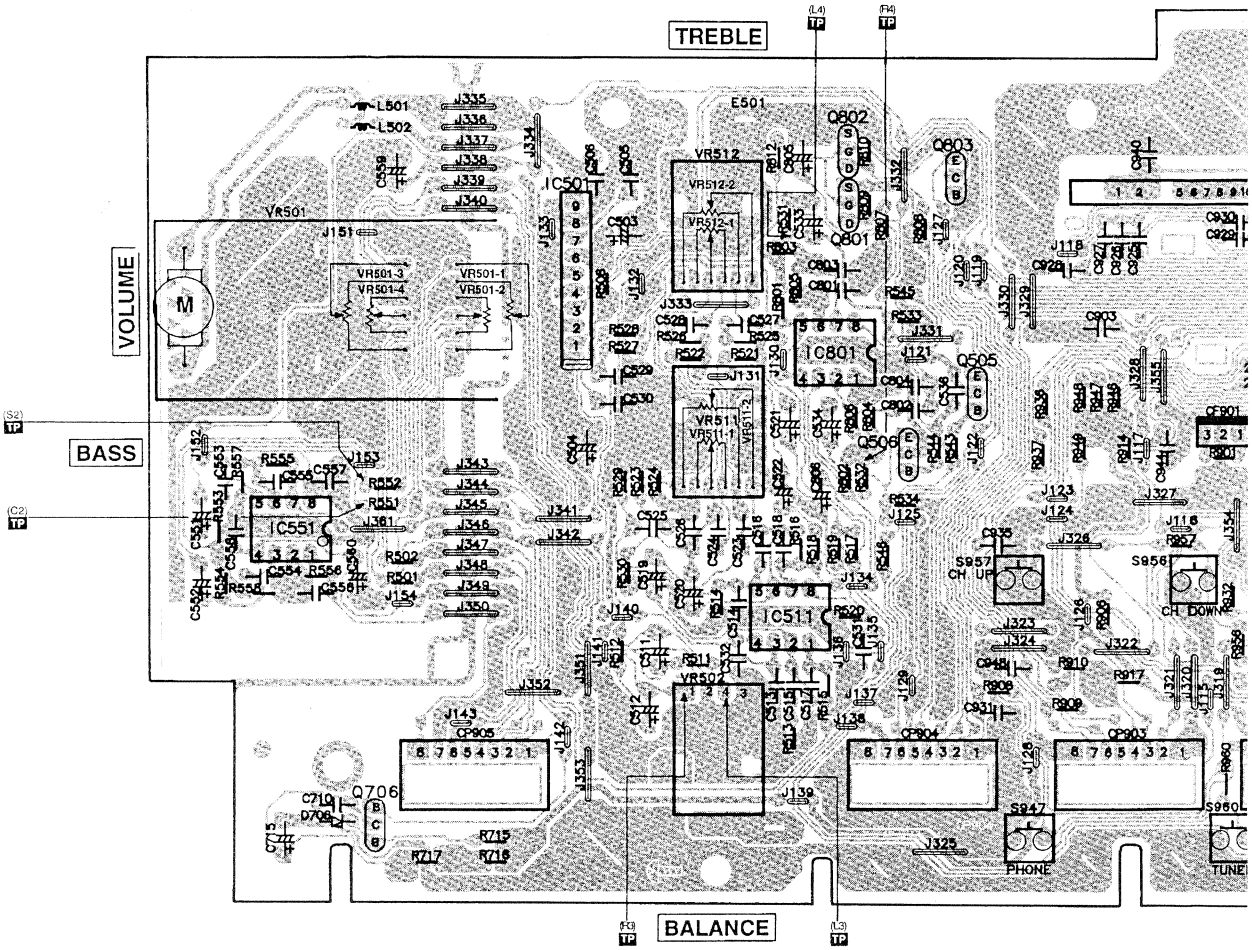
■ Printed Circuit Board

K PRO LOGIC P.C.B. (REP2241A-T)

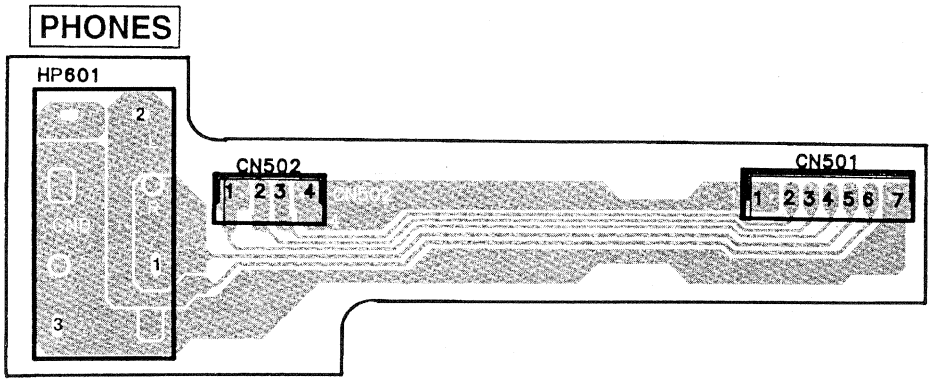


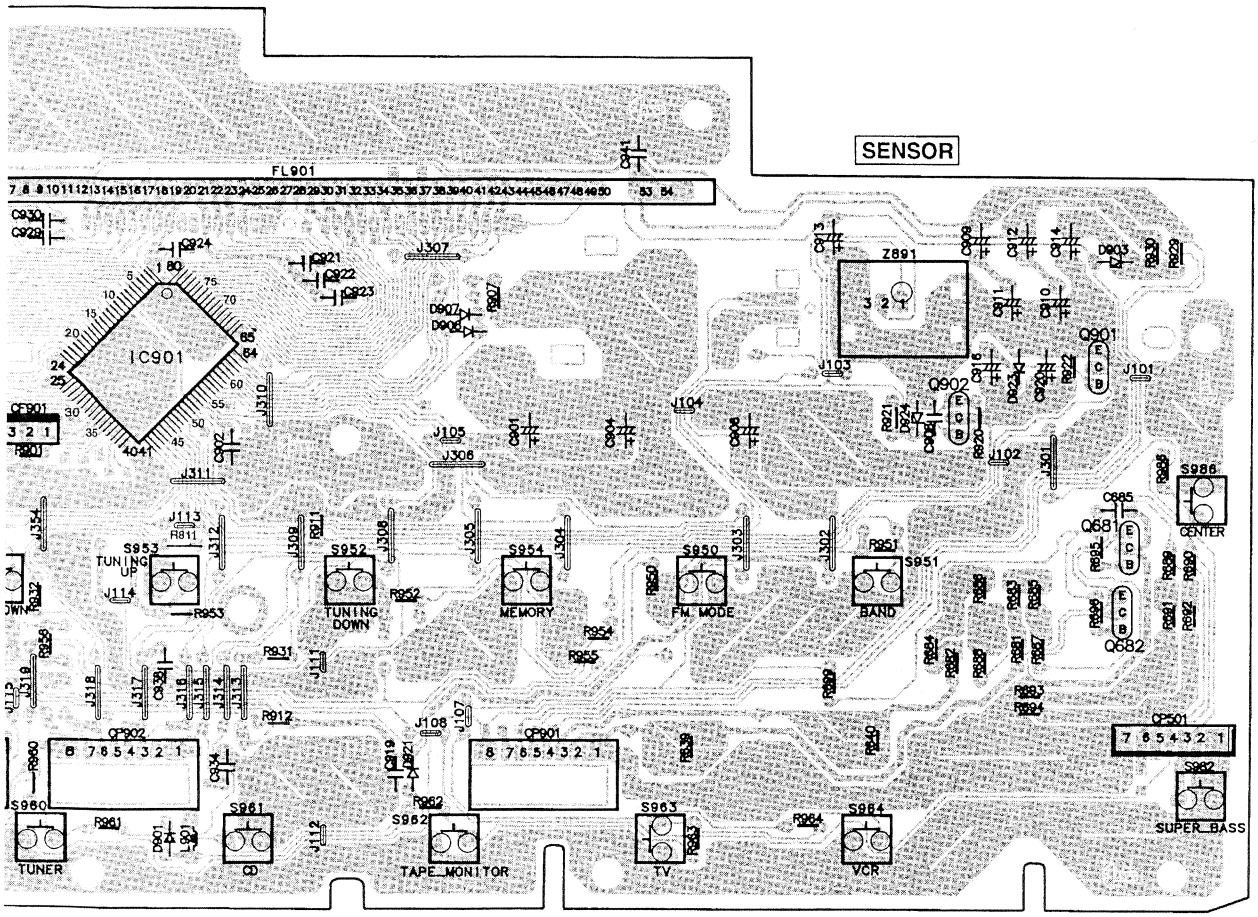
C VOLUME P.C.B. (REP2333A-S)

B PANEL P.C.B. (REP2333A-S)

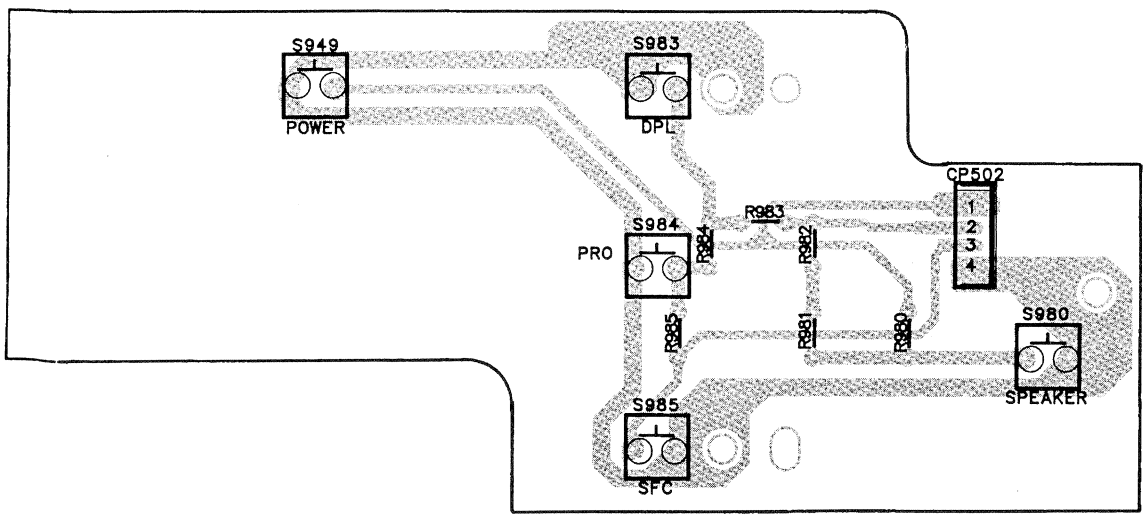


D HEADPHONE JACK P.C.B. (REP2333A-S)

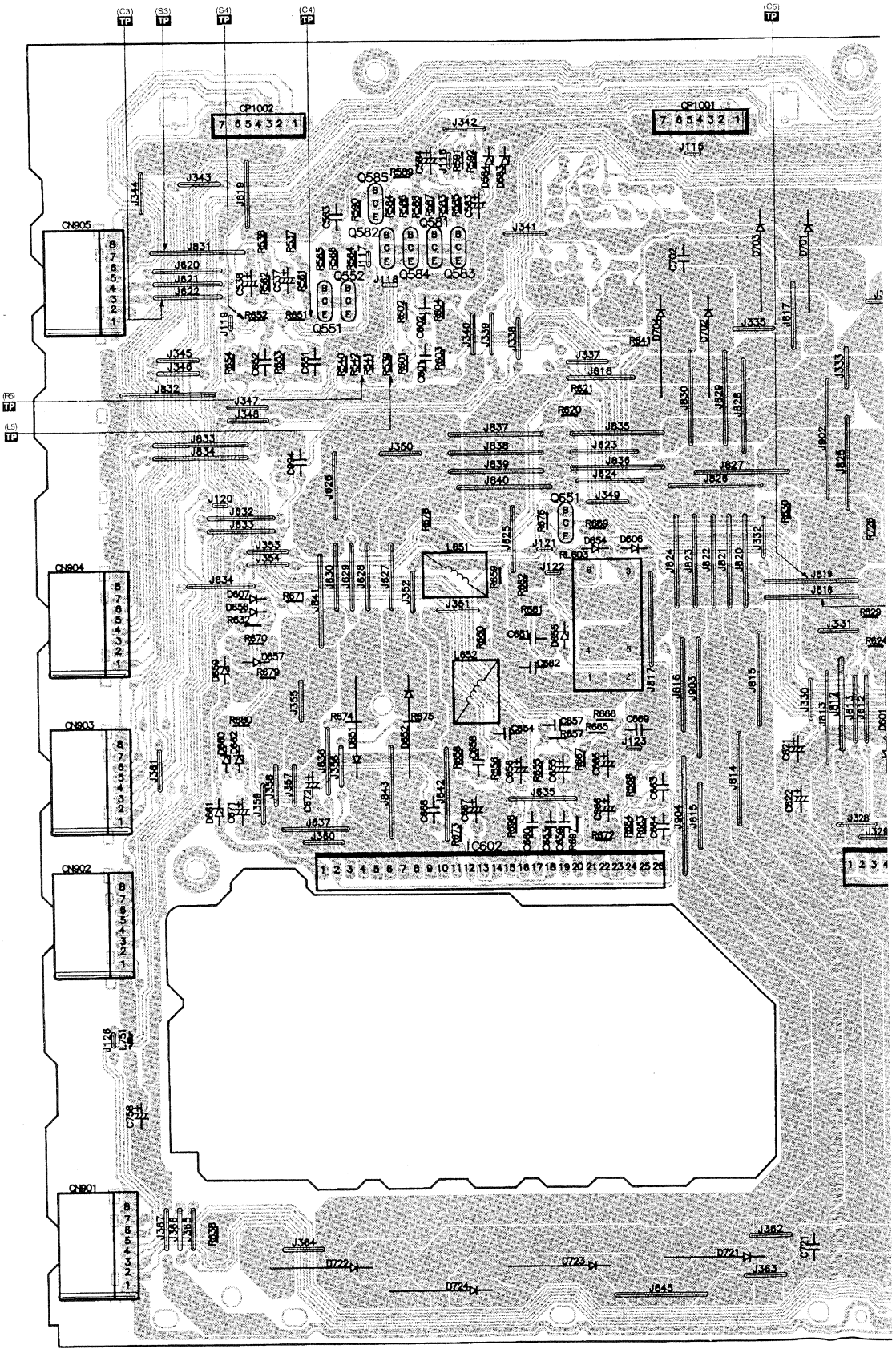


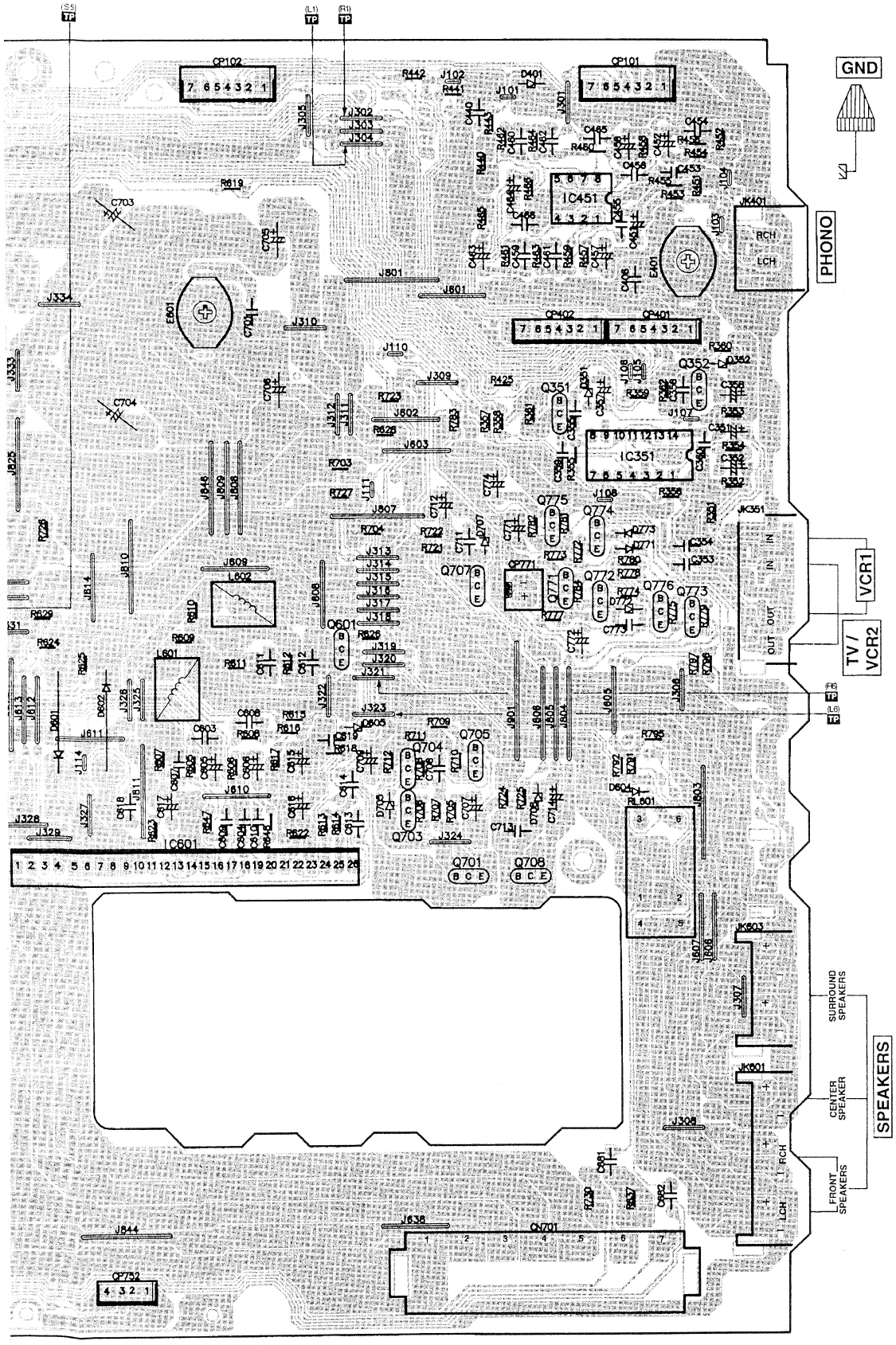


H OPERATION P.C.B. (REP2333A-S)

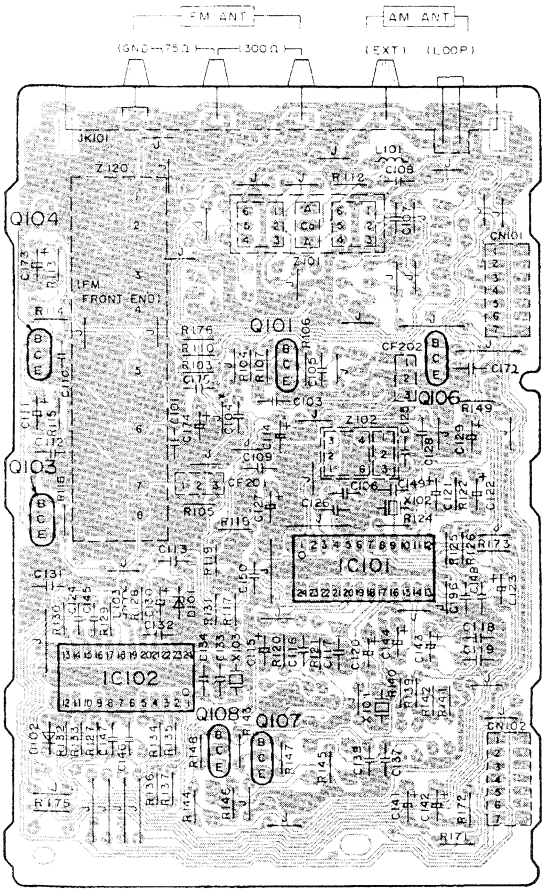


E MAIN P.C.B. (REP2332A-M)

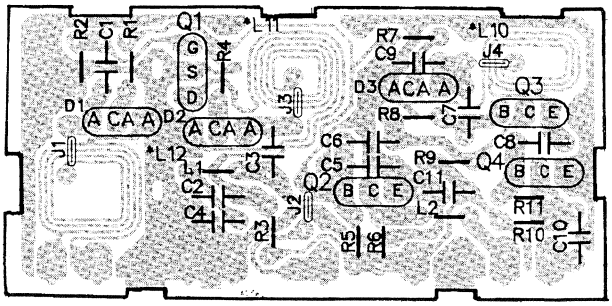



GND
PHONO
VCR1
TV / VCR2
SPEAKERS
SURROUND SPEAKERS
CENTER SPEAKER
FRONT SPEAKERS
IC451
IC351
IC601
Q351
Q352
Q701
Q703
Q704
Q705
Q706
Q707
Q771
Q772
Q773
Q774
Q775
Q776
Q601
JK401
JK351
JK601
JK603
CP101
CP102
CP401
CP402
CP732
QN701

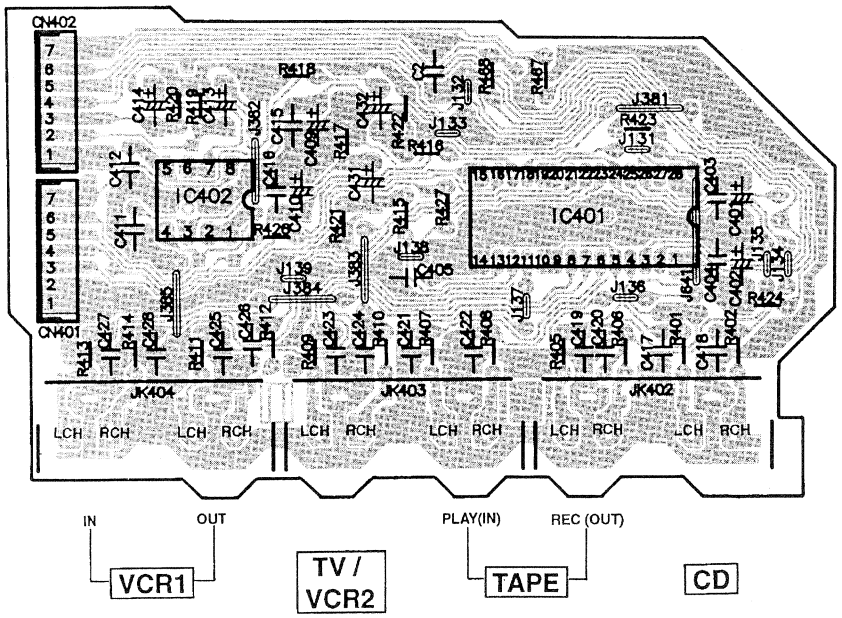
A TUNER P.C.B. (REP2254A-T)



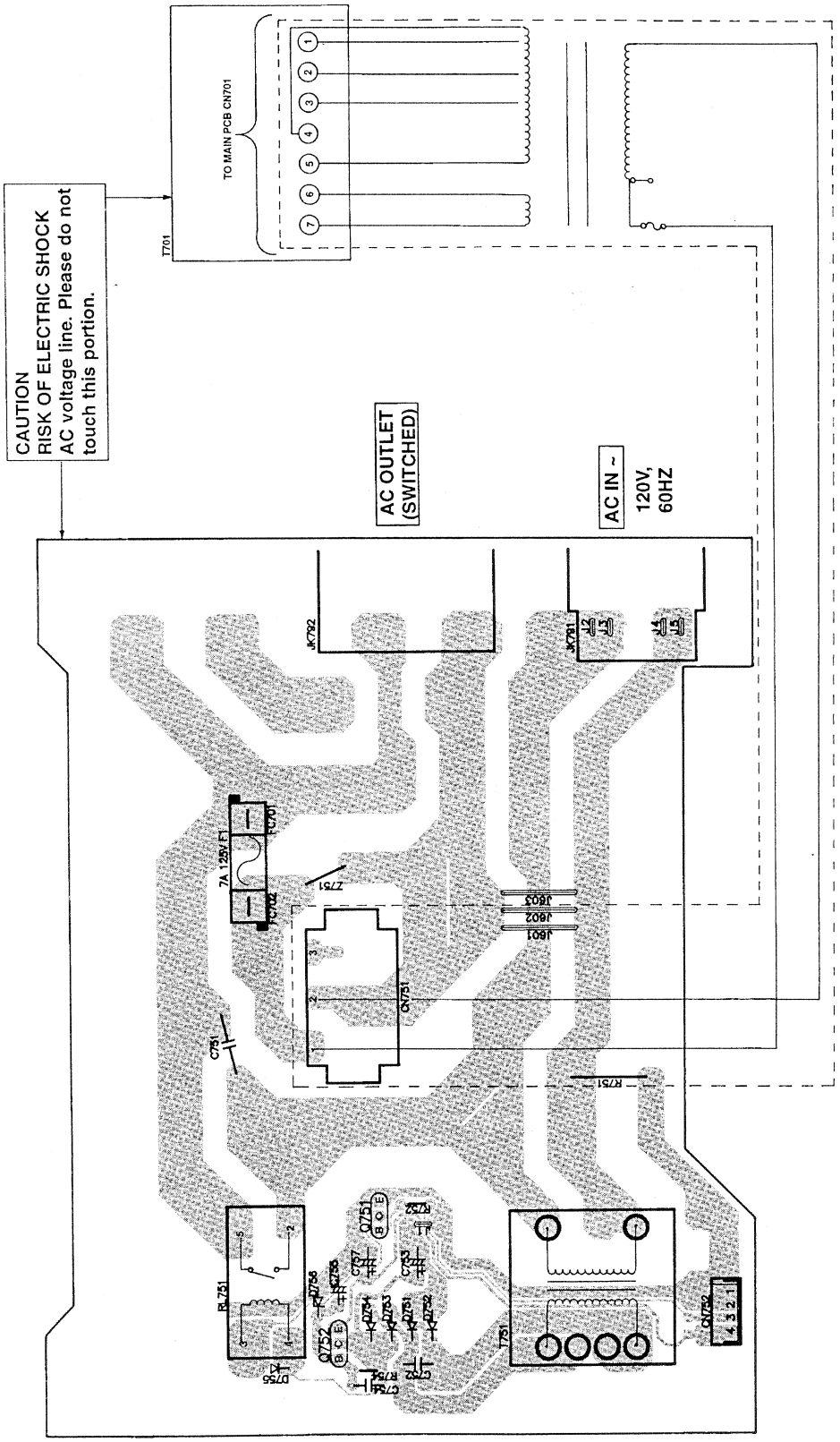
J TUNER PACK P.C.B. (REP1999B)



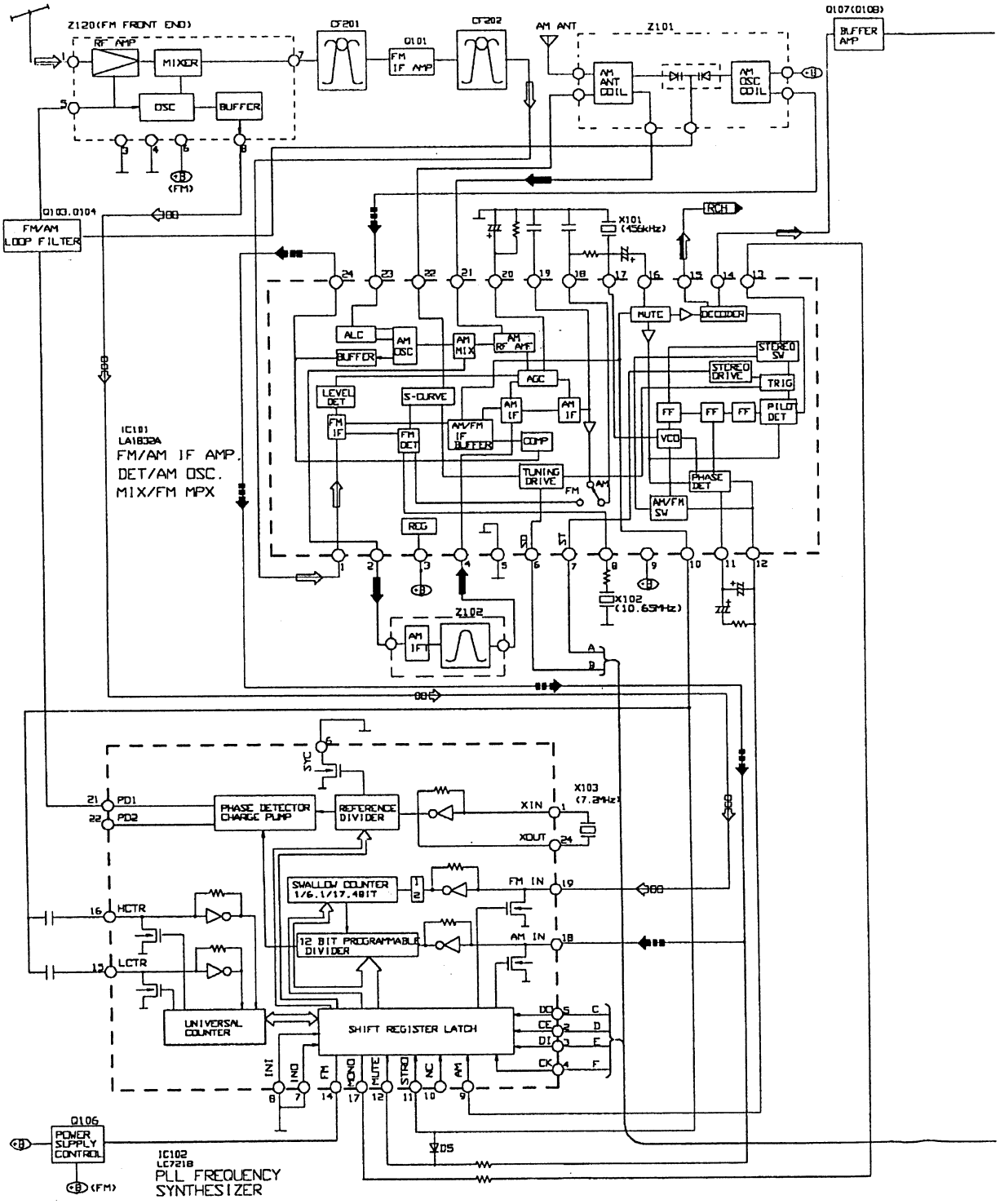
I IN/OUT TERMINAL P.C.B. (REP2332A-M)

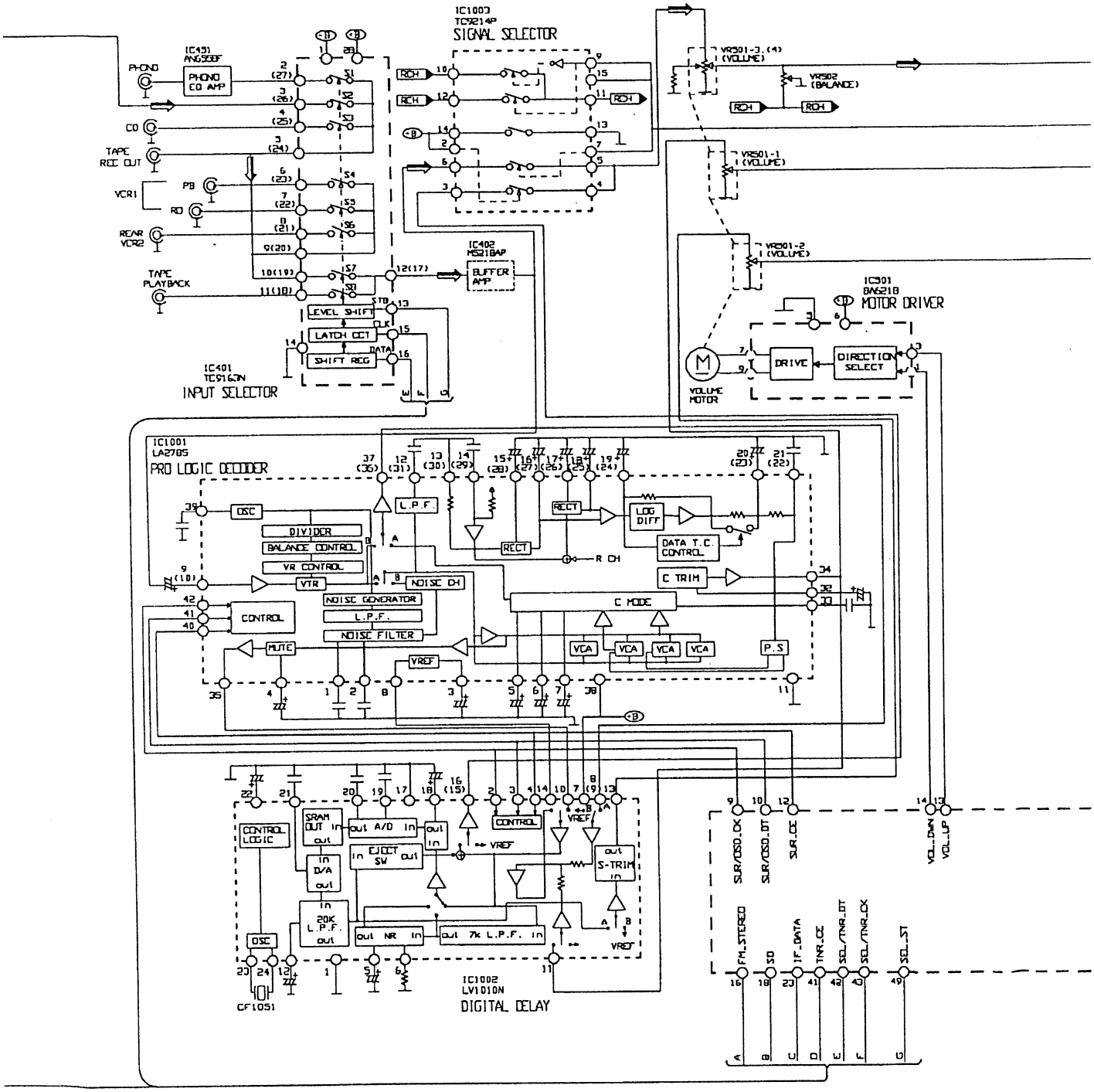


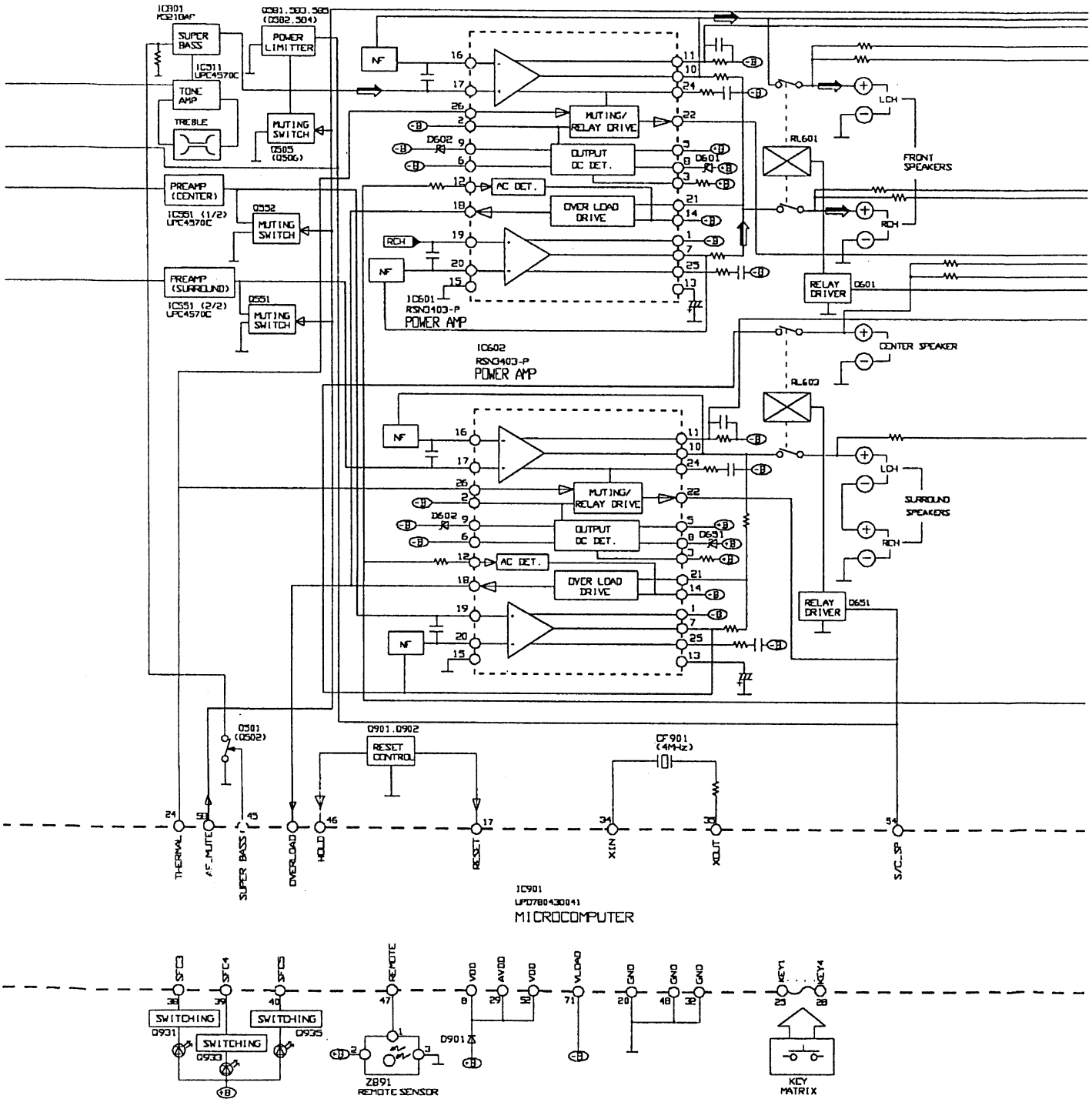
F POWER SUPPLY P.C.B. (REP2334A-P)

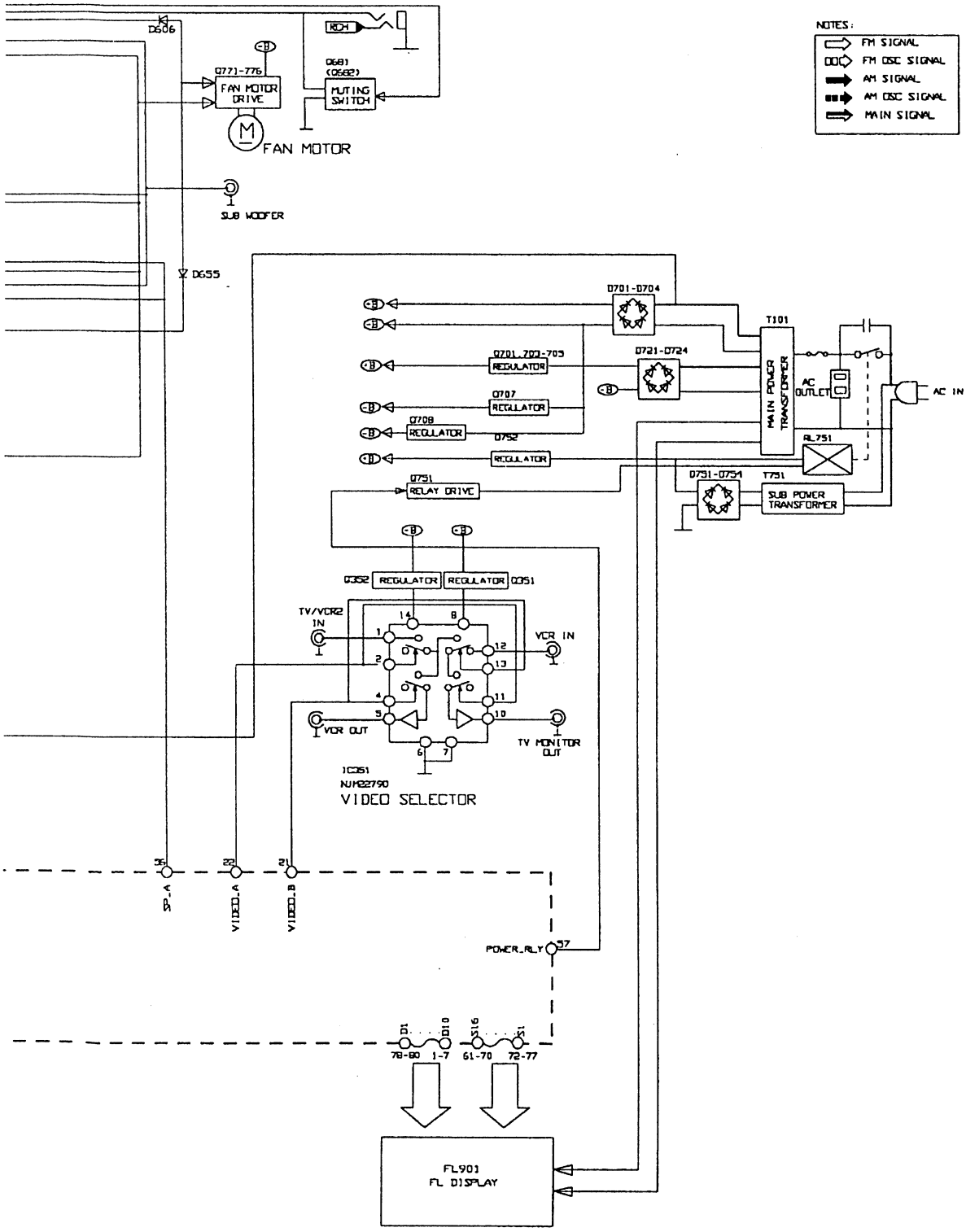


■ Block Diagram

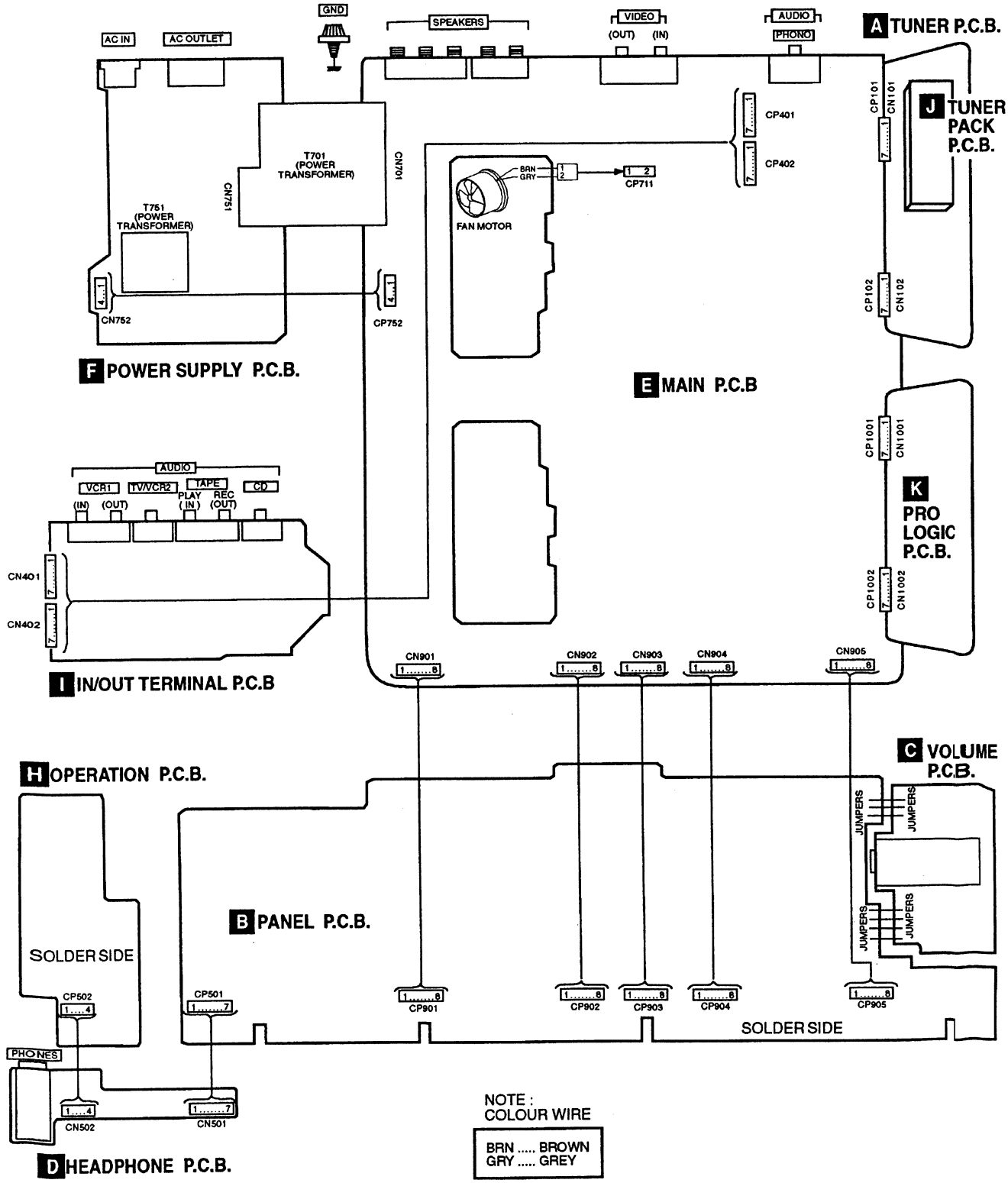



IC1003
TC9214P
SIGNAL SELECTOR
IC451
AN6566F
PHONO EQ AMP
PHONO
CD
TAPE REC OUT
VCR1
PB
RD
REAR VCR2
TAPE PLAYBACK
IC402
MS218AP
BUFFER AMP
LEVEL SHIFT
LATCH CCT
SHIFT REG
IC401
TC9163N
INPUT SELECTOR
VR501-3,(4)
(VOLUME)
VR502
(BALANCE)
VR501-1
(VOLUME)
VR501-2
(VOLUME)
IC301
BA6218
MOTOR DRIVER
DRIVE
DIRECTION SELECT
VOLUME MOTOR
IC1001
LA2785
PRO LOGIC DECODER
OSC
DIVIDER
BALANCE CONTROL
VR CONTROL
VTR
CONTROL
MUTE
L.P.F.
RECT
LOG DIFF
DATA T.C. CONTROL
R CH
C TRIM
C MODE
NOISE CH
NOISE GENERATOR
L.P.F.
NOISE FILTER
VCA
P.S
VREF
IC1002
LV1010N
DIGITAL DELAY
CONTROL LOGIC
SRAM
A/D
D/A
EJECT SW
S-TRIM
20K L.P.F.
NR
7k L.P.F.
CF1051
SUR/OSD.CK
SUR/OSD.DT
SUR.CE
VOL_DWN
VOL_UP
FM_STEREO
SD
IF_DATA
TNR.CE
SEL/TNR.DT
SEL/TNR.CK
SEL.ST


SUPER BASS
POWER LIMITTER
TONE AMP
TREBLE
MUTING SWITCH
PREAMP (CENTER)
MUTING SWITCH
PREAMP (SURROUND)
MUTING SWITCH
NF
MUTING/ RELAY DRIVE
OUTPUT DC DET.
AC DET.
OVER LOAD DRIVE
RCH
POWER AMP
RSN0403-P
RELAY DRIVER
FRONT SPEAKERS
CENTER SPEAKER
SURROUND SPEAKERS
LCH
RCH
RESET CONTROL
THERMAL
SUPER BASS
OVERLOAD
HOLD
RESET
XIN
XOUT
MICROCOMPUTER
UPD780430041
REMOTE
SWITCHING
ZB91
REMOTE SENSOR
KEY MATRIX


NOTES:
FM SIGNAL
FM OSC SIGNAL
AM SIGNAL
AM OSC SIGNAL
MAIN SIGNAL
FAN MOTOR
FAN MOTOR DRIVE
MUTING SWITCH
SUB WOOFER
AC IN
AC OUTLET
MAIN POWER TRANSFORMER
SUB POWER TRANSFORMER
REGULATOR
RELAY DRIVE
TV/VCR2 IN
VCR IN
VCR OUT
TV MONITOR OUT
VIDEO SELECTOR
SP-A
VIDEO-A
VIDEO-B
POWER_RLY
FL901
FL DISPLAY

■ Wiring Connection Diagram



■ Schematic Diagram

(All schematic diagrams may be modified at any time with the development of new technology)

Note :

< for Operation circuit > (Page 35)

- **S949** : Power switch
- **S980** : Speakers on/off switch
- **S983** : Dolby Pro Logic / SFC on/off switch
- **S984** : Dolby Pro Logic mode select switch
- **S985** : SFC mode select switch

< for Panel circuit and Volume circuit > (Page 37 ~ 38)

- **S947** : Phono select switch
- **S950** : FM Auto / Mono switch
- **S951** : Band select switch
- **S952** : Tuning decrease switch
- **S953** : Tuning increase switch
- **S954** : Memory manual/auto switch
- **S956** : Preset decrease switch
- **S957** : Preset increase switch
- **S960** : Tuner select switch
- **S961** : CD select switch
- **S962** : Tape monitor select switch
- **S963** : TV / VCR2 select switch
- **S964** : VCR1 select switch
- **S982** : Super bass select switch
- **S986** : Center mode select switch
- **VR501-1 ~ VR501-4** : Volume control
- **VR502** : Balance control
- **VR511-1 ~ VR511-2** : Bass control
- **VR512-1 ~ VR512-2** : Treble control

• Signal line

: +B line
: – B line
: Main signal line
: FM signal line
: AM signal line
: AM OSC signal line
: FM OSC signal line

•The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

( ) ..... AM < > ..... FM

•Importance safety notice:
Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !
IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
•Cover the parts boxes made of plastics with aluminium foil.
•Ground the soldering iron.
•Do not touch the pins of IC, LSI or VLSI with fingers directly.
•Put a conductive mat on the work table.

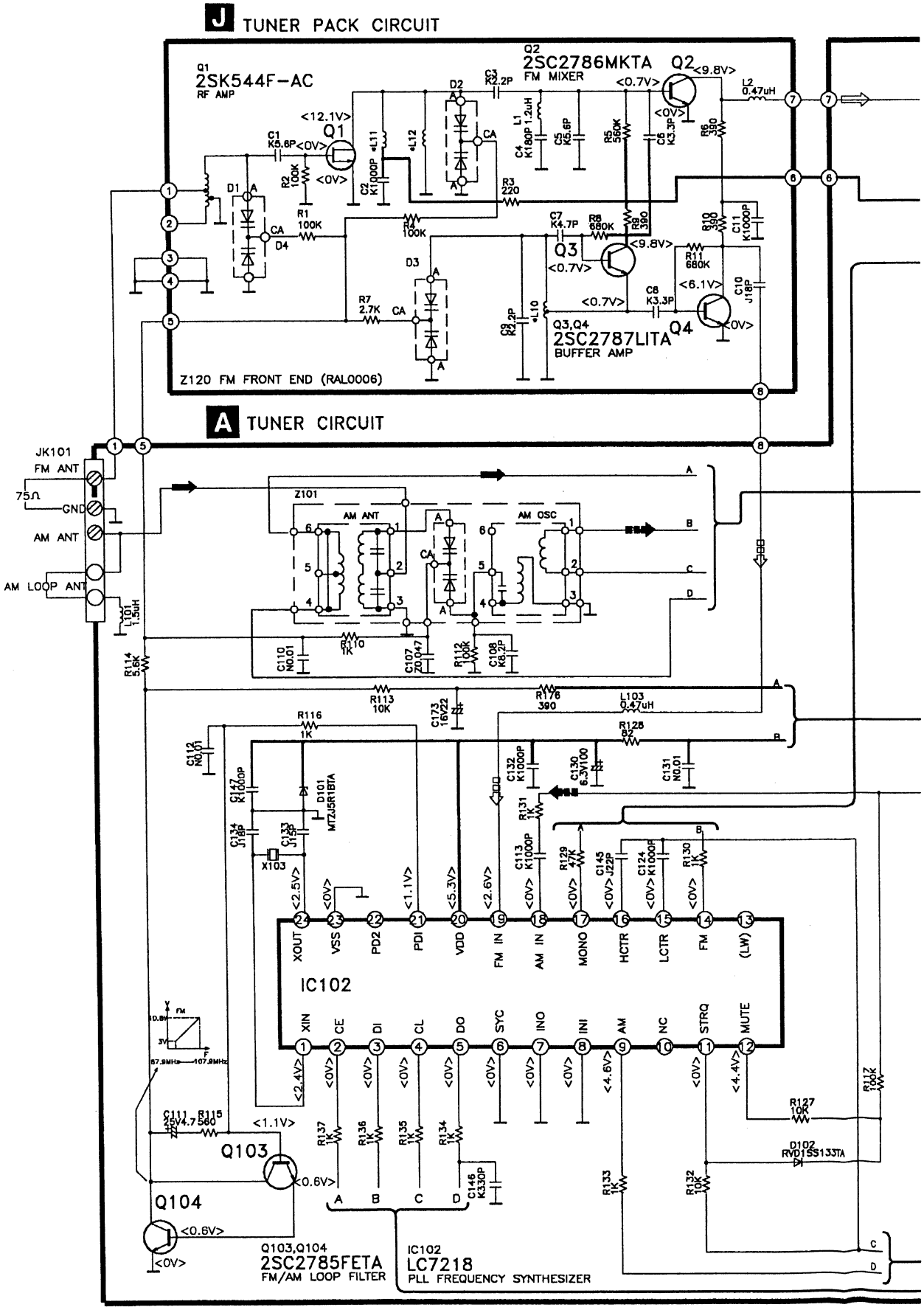
CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE **F1 7.0A 125V FUSE.**

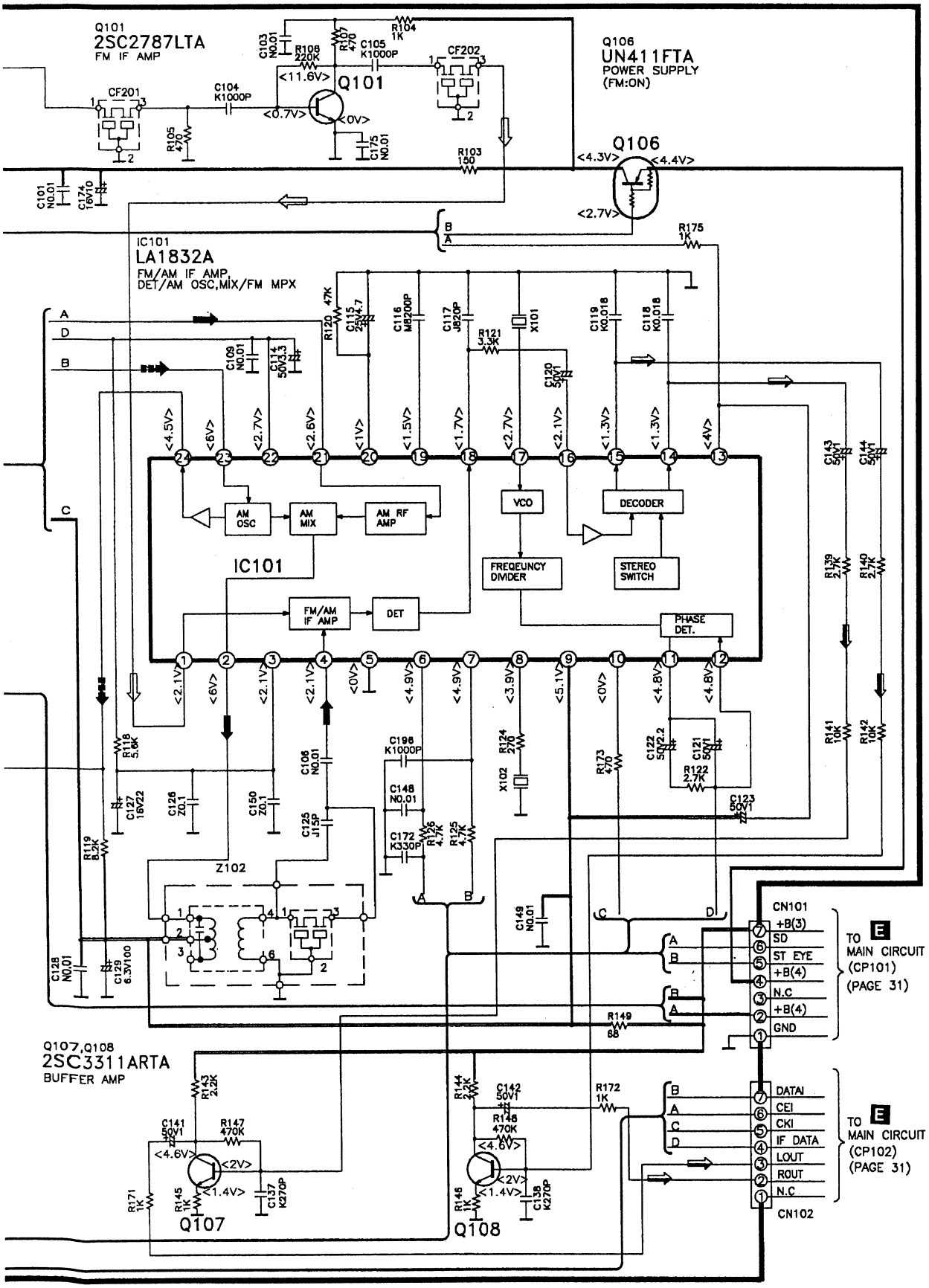
RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

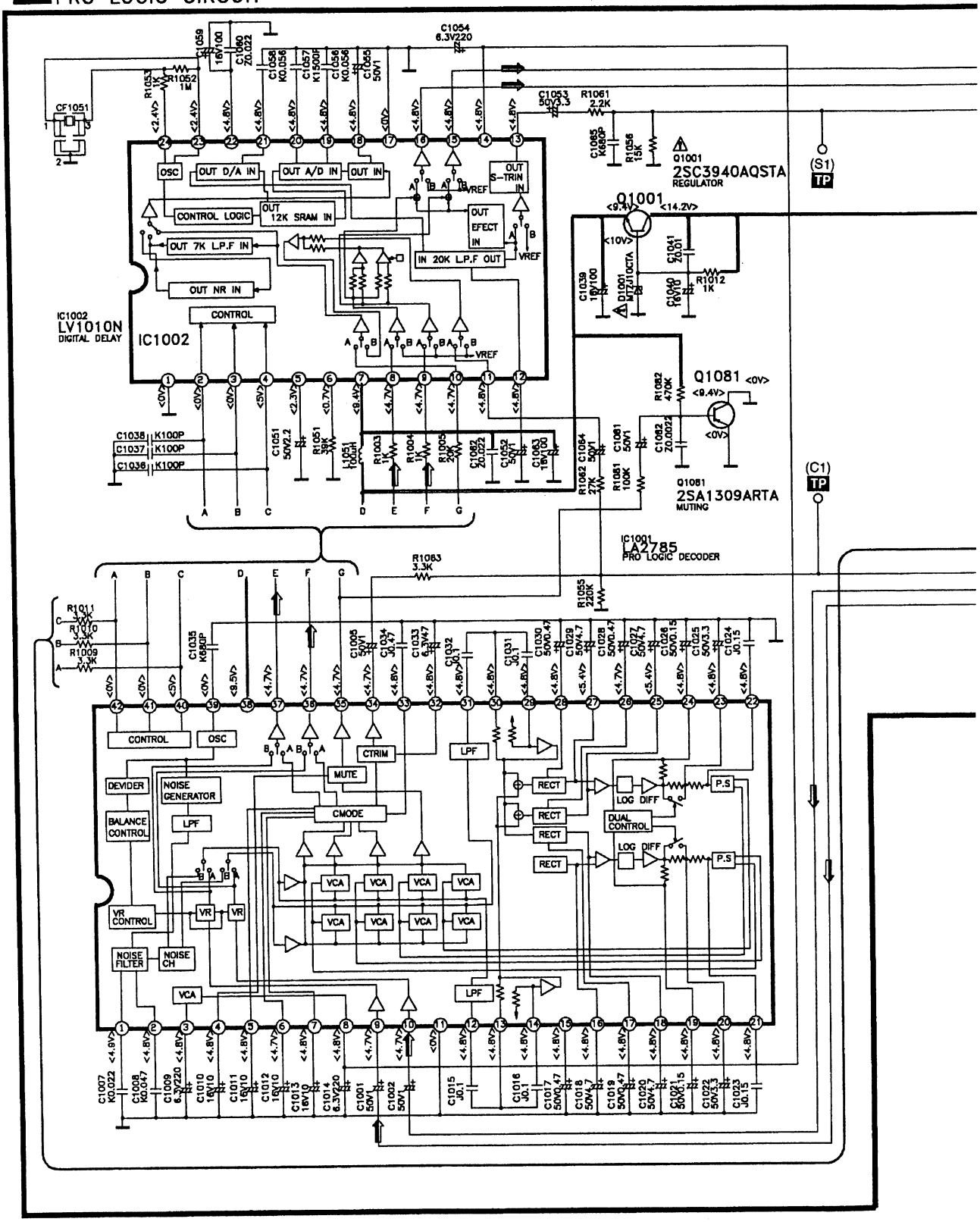
These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

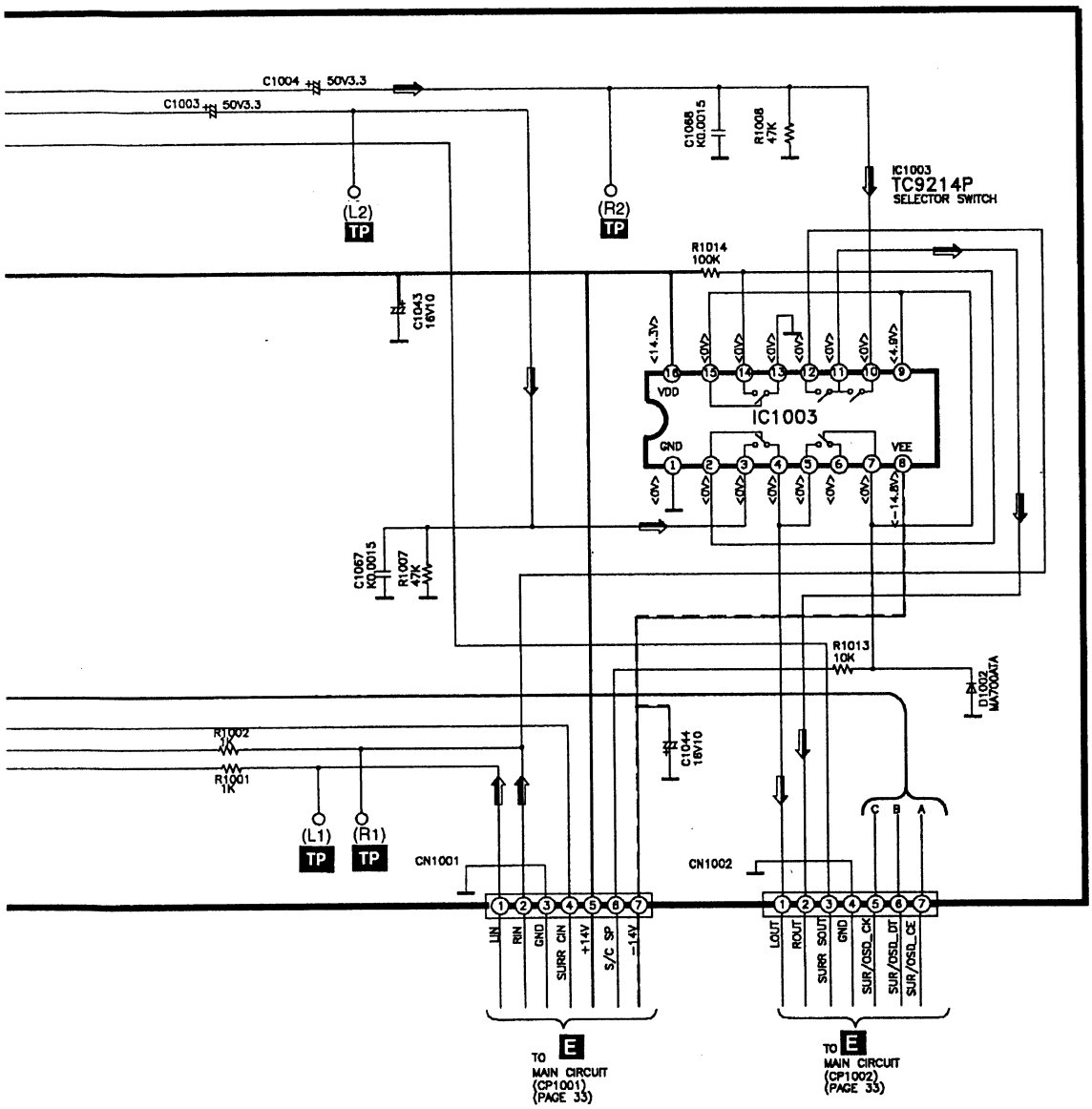
Ce symbole indique que le fusible utilisé est à rapide. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.


J TUNER PACK CIRCUIT
Q1
2SK544F-AC
RF AMP
Q2
2SC2786MKTA
FM MIXER
Q3
Q4
2SC2787LITA
BUFFER AMP
Z120 FM FRONT END (RAL0006)
A TUNER CIRCUIT
JK101
FM ANT
75Ω
GND
AM ANT
AM LOOP ANT
Z101
AM ANT
AM OSC
IC102
XOUT
VSS
PD2
PDI
VDD
FM IN
AM IN
MONO
HCTR
LCTR
FM
(LW)
XIN
CE
DI
CL
DO
SYC
INO
INI
AM
NC
STRQ
MUTE
Q103
Q104
Q103,Q104
2SC2785FETA
FM/AM LOOP FILTER
IC102
LC7218
PLL FREQUENCY SYNTHESIZER

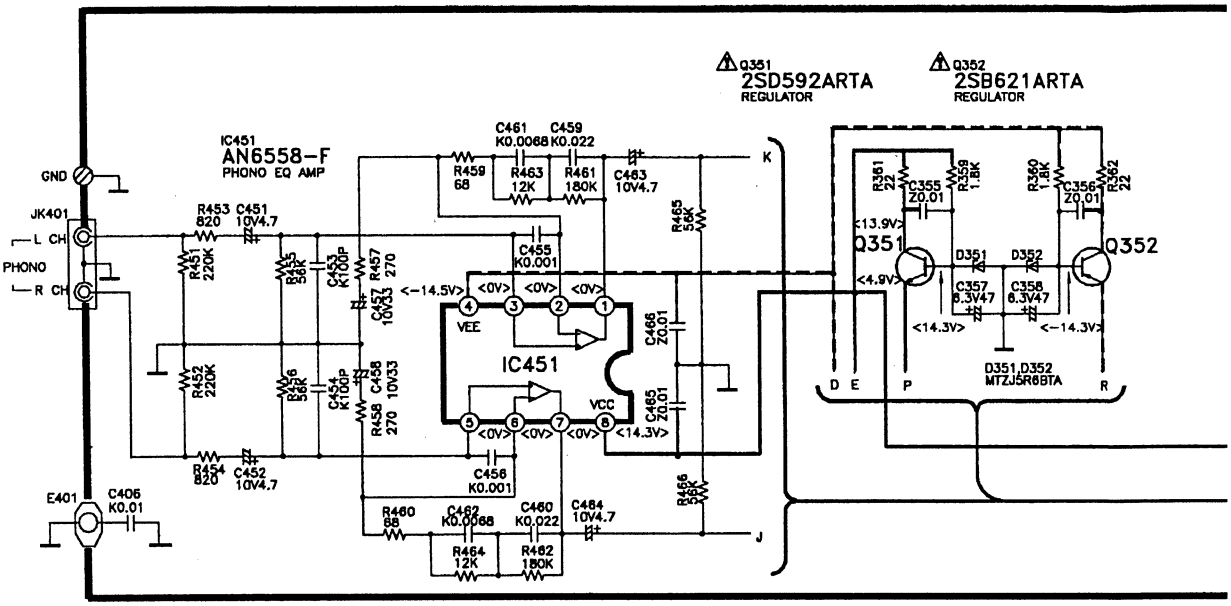

Q101
2SC2787LTA
FM IF AMP
Q106
UN411FTA
POWER SUPPLY
(FM:ON)
IC101
LA1832A
FM/AM IF AMP,
DET/AM OSC,MIX/FM MPX
AM OSC
AM MIX
AM RF AMP
VCO
DECODER
FREQEUNCY DIVIDER
STEREO SWITCH
FM/AM IF AMP
DET
PHASE DET.
Z102
X101
X102
CF201
CF202
Q107,Q108
2SC3311ARTA
BUFFER AMP
Q107
Q108
CN101
+B(3)
SD
ST EYE
+B(4)
N.C
+B(4)
GND
TO E MAIN CIRCUIT (CP101) (PAGE 31)
DATAI
CEI
CKI
IF DATA
LOUT
ROUT
N.C
CN102
TO E MAIN CIRCUIT (CP102) (PAGE 31)

K PRO LOGIC CIRCUIT

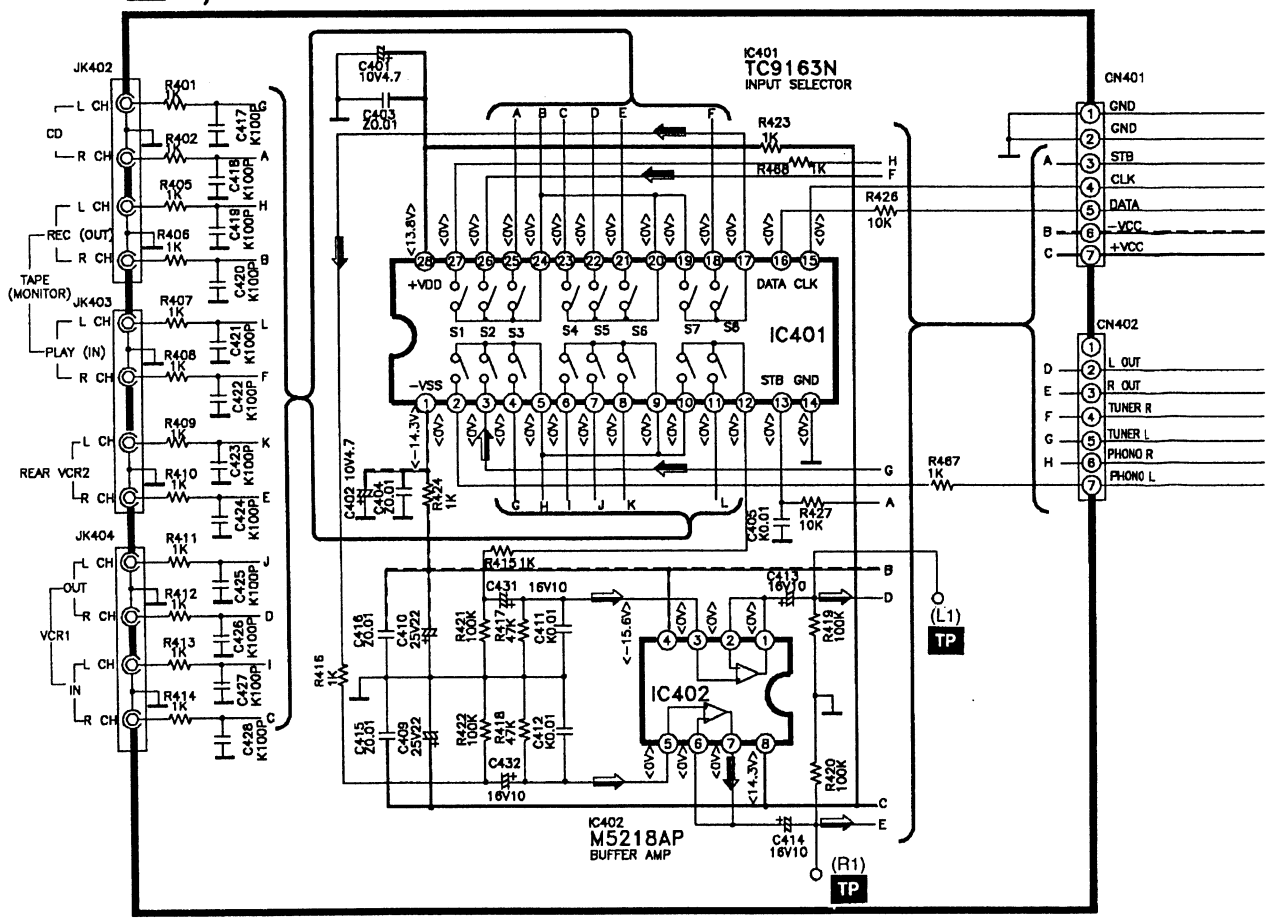


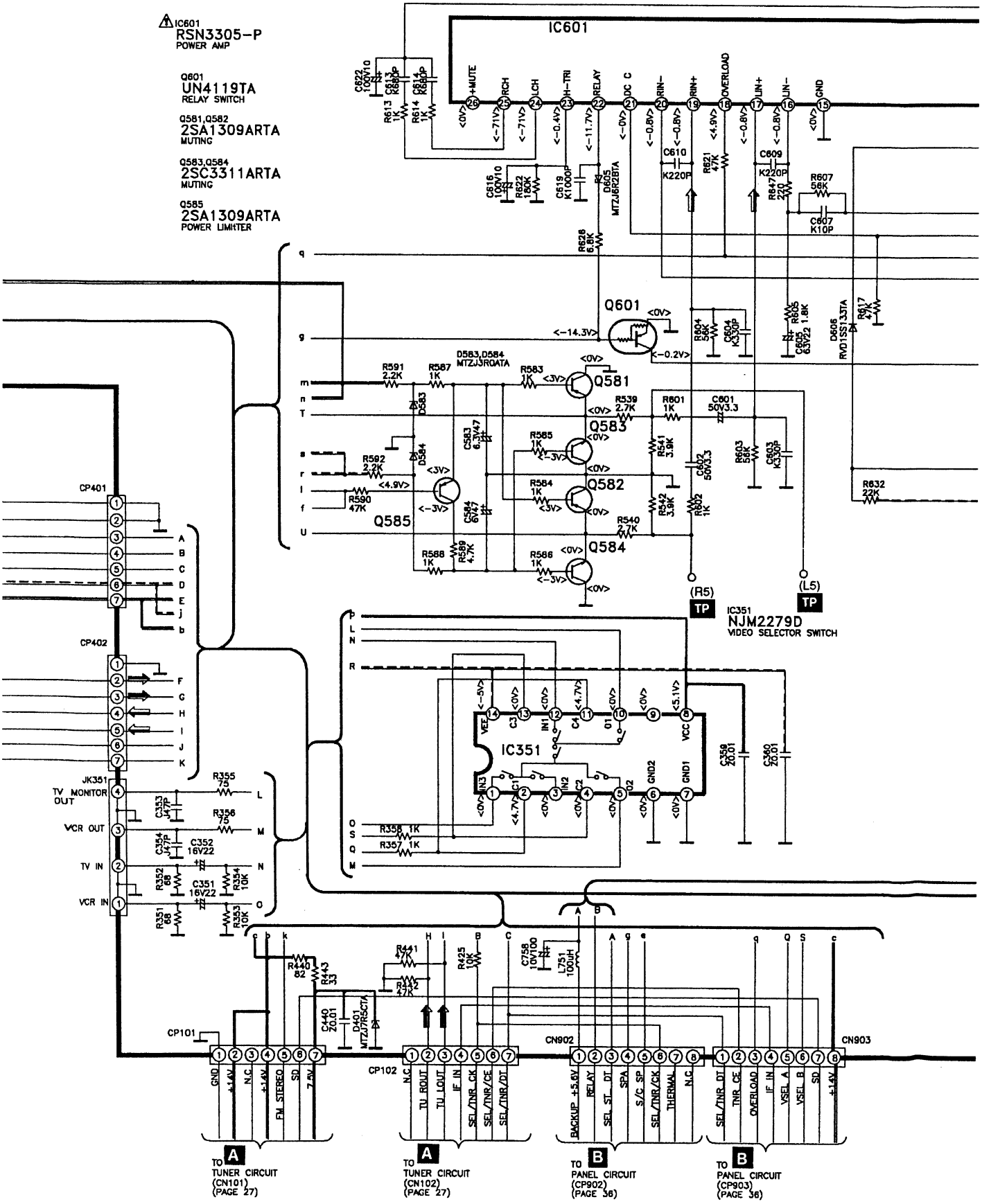

C1004 50V3.3
C1003 50V3.3
C1065 KD.0015
R1008 47K
IC1003
TC9214P
SELECTOR SWITCH
(L2)
TP
(R2)
TP
R1014 100K
C1043 16V10
<14.3V>
VDD
IC1003
GND
VEE
<-14.8V>
C1067 KD.0015
R1007 47K
R1013 10K
D1002 MA700ATA
R1002 1K
R1001 1K
C1044 16V10
(L1)
TP
(R1)
TP
CN1001
CN1002
C B A
LIN
RIN
GND
SURR CIN
+14V
S/C SP
-14V
LOUT
ROUT
SURR SOUT
GND
SUR/OSD_CK
SUR/OSD_DT
SUR/OSD_CE
TO E
MAIN CIRCUIT
(CP1001)
(PAGE 33)
TO E
MAIN CIRCUIT
(CP1002)
(PAGE 33)

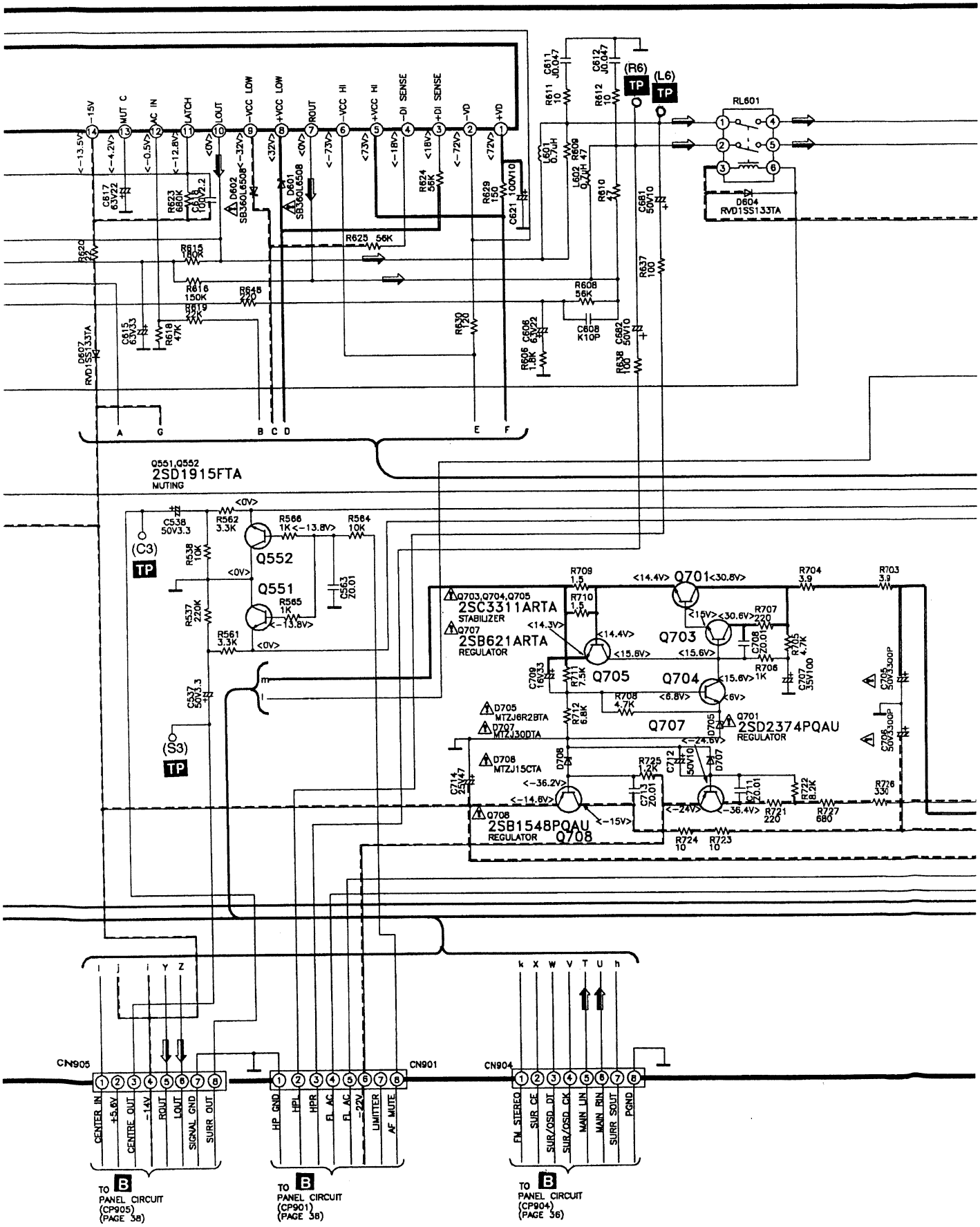
E MAIN CIRCUIT

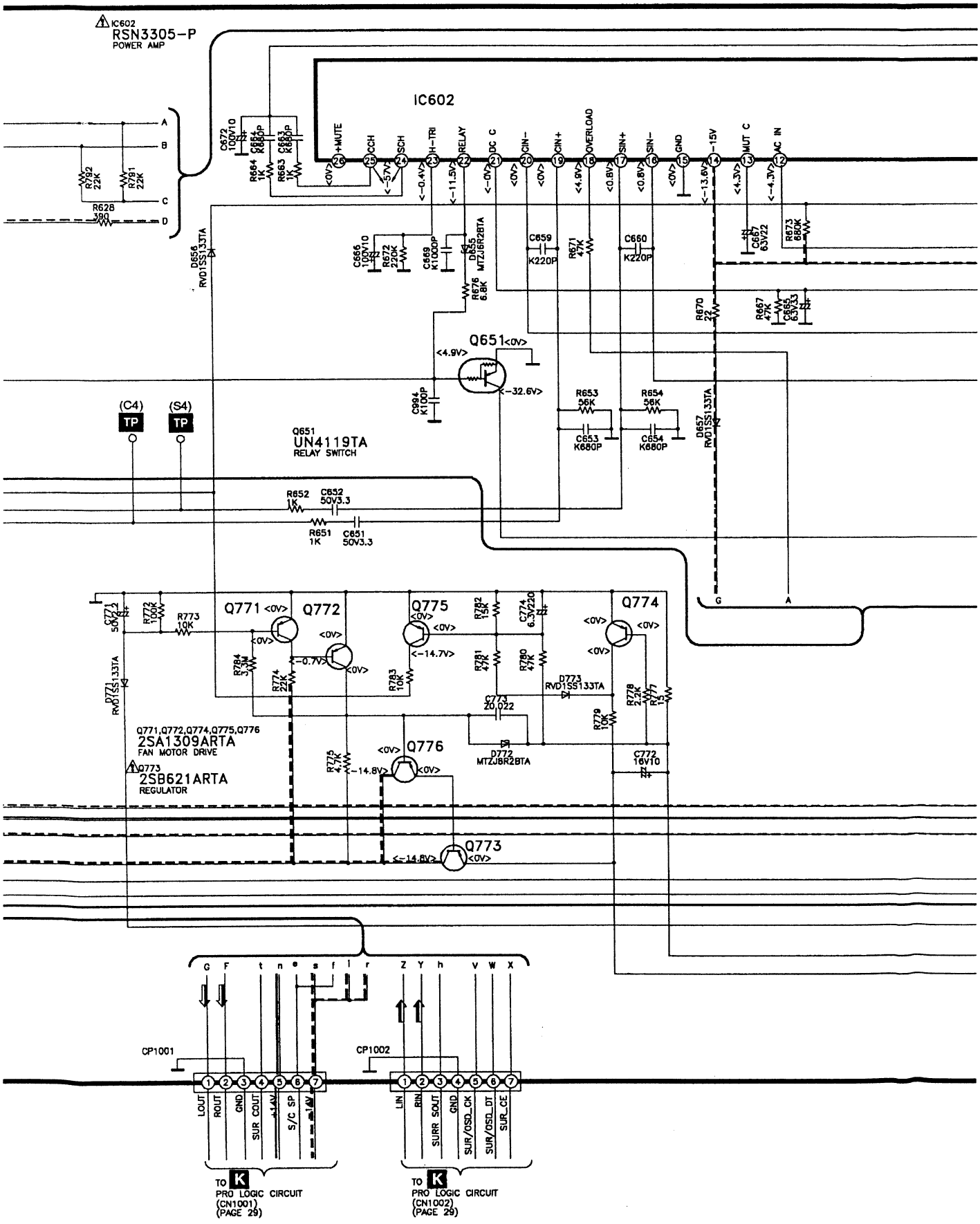


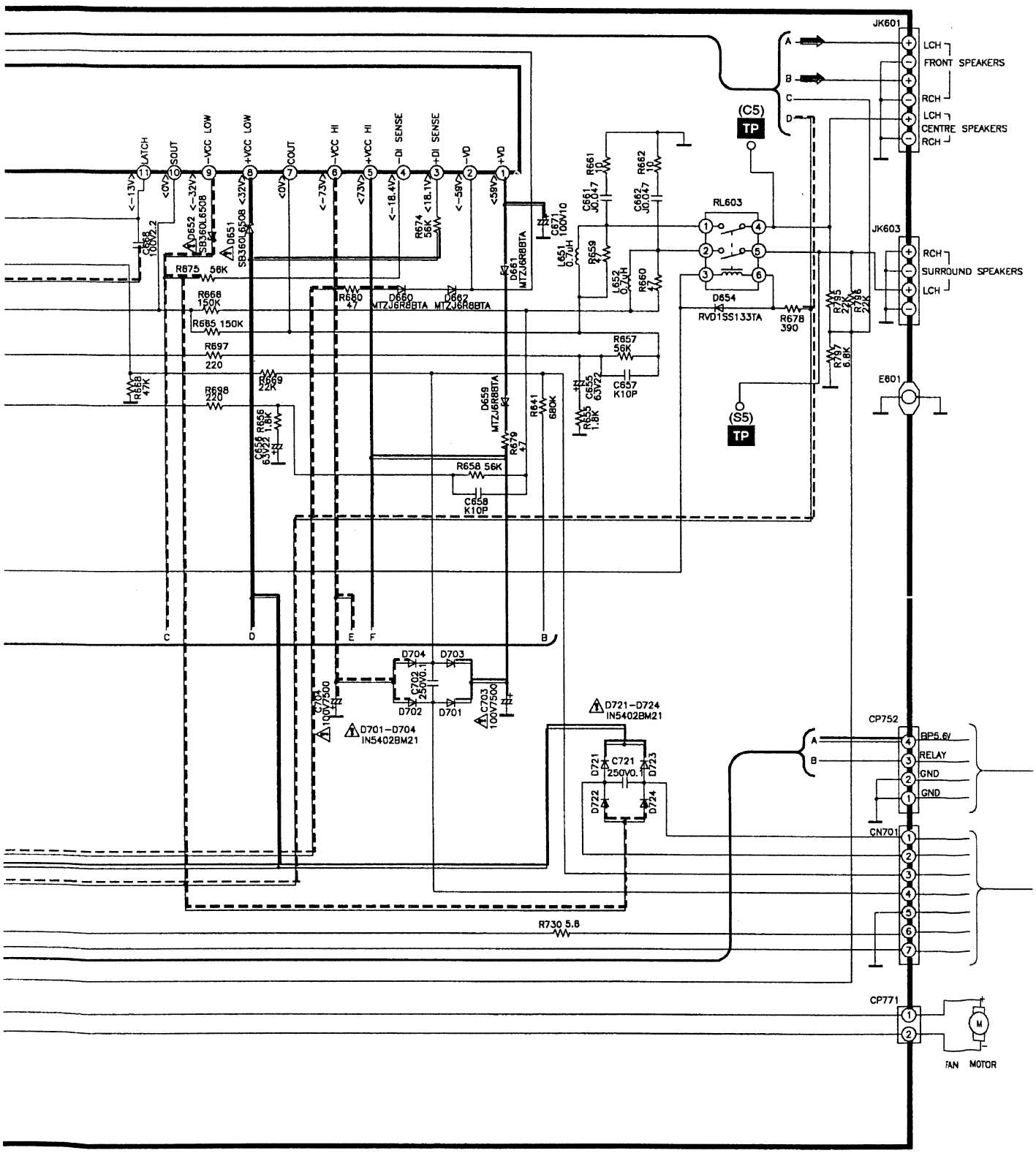
I IN/OUT TERMINAL CIRCUIT

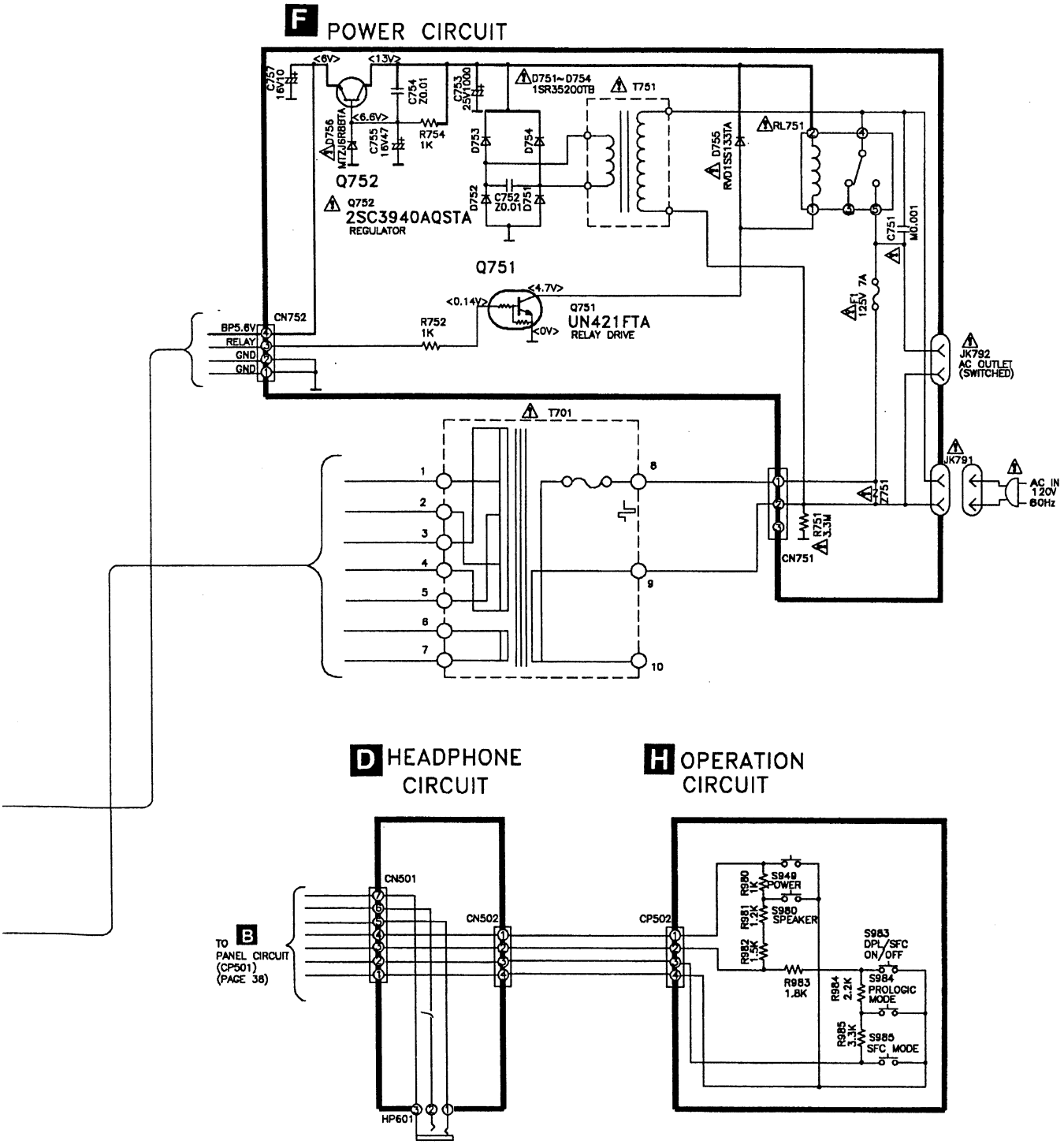



IC601
RSN3305-P
POWER AMP
Q601
UN4119TA
RELAY SWITCH
Q581,Q582
2SA1309ARTA
MUTING
Q583,Q584
2SC3311ARTA
MUTING
Q585
2SA1309ARTA
POWER LIMITER
IC601
+MUTE
RCH
LCH
H-TRI
RELAY
DC C
RIN-
RIN+
OVERLOAD
LIN+
LIN-
GND
Q601
Q581
Q583
Q582
Q584
Q585
D583,D584
MTZJ3R0ATA
D605
MTZJ6R2BTA
D606
RVD1SS133TA
(R5)
(L5)
TP
IC351
NJM2279D
VIDEO SELECTOR SWITCH
CP401
CP402
JK351
TV MONITOR OUT
VCR OUT
TV IN
VCR IN
CP101
CP102
CN902
CN903
GND
+14V
N.C
+14V
FM STEREO
SD
7.5V
N.C
TU ROUT
TU LOUT
IF IN
SEL/TNR/CK
SEL/TNR/CE
SEL/TNR/DT
BACKUP +5.6V
RELAY
SEL ST DT
SPA
S/C SP
SEL/TNR/CK
THERMAL
N.C
SEL/TNR DT
TNR CE
OVERLOAD
IF IN
VSEL A
VSEL B
SD
+14V
TO A TUNER CIRCUIT (CN101) (PAGE 27)
TO A TUNER CIRCUIT (CN102) (PAGE 27)
TO B PANEL CIRCUIT (CP902) (PAGE 36)
TO B PANEL CIRCUIT (CP903) (PAGE 36)

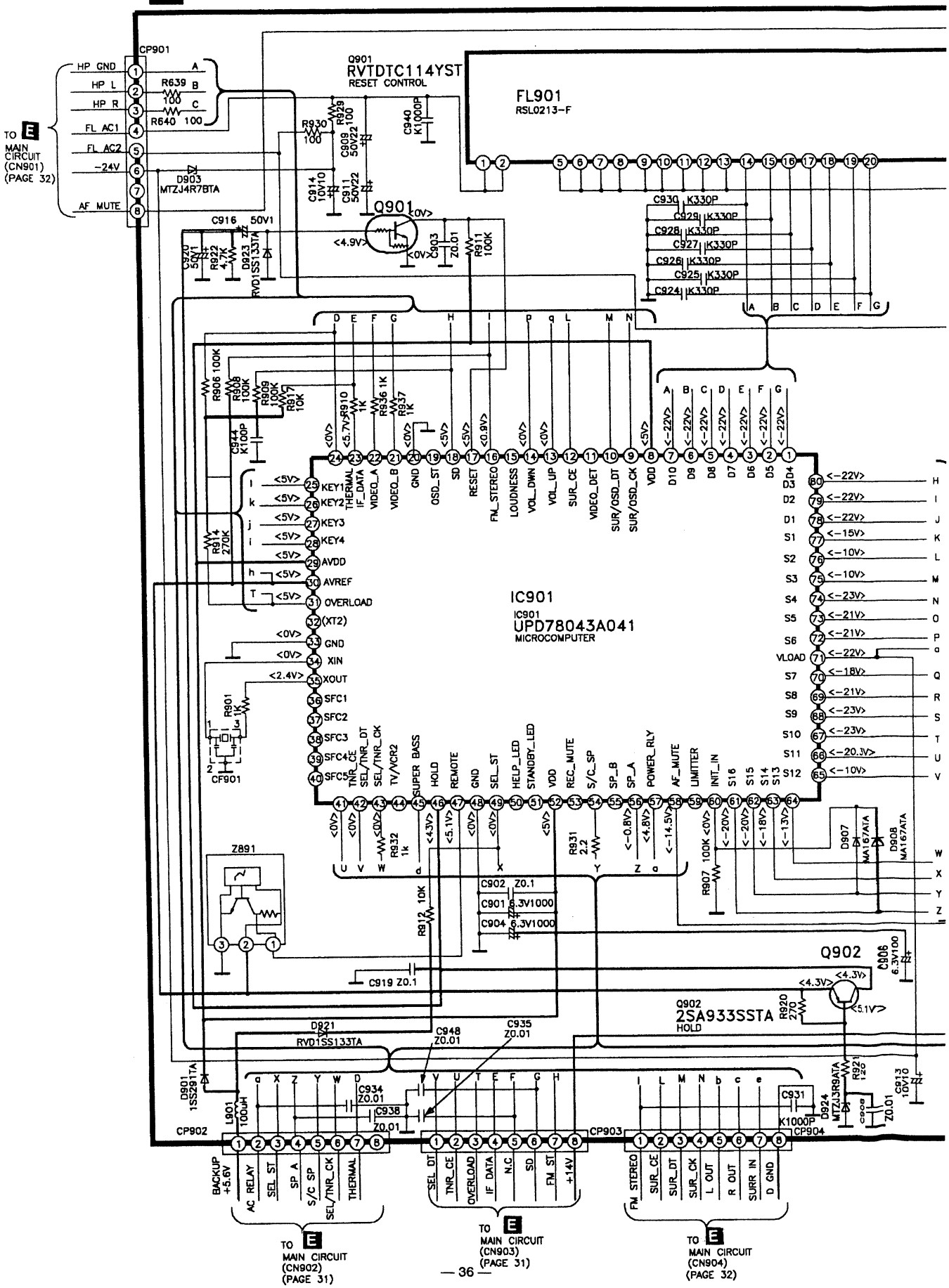

Q551,Q552
2SD1915FTA
MUTING
Q552
Q551
Q703,Q704,Q705
2SC3311ARTA
STABILIZER
Q707
2SB621ARTA
REGULATOR
Q703
Q705
Q704
Q707
Q701
2SD2374PQAU
REGULATOR
Q708
2SB1548PQAU
REGULATOR
D705
MTZJ6R2BTA
D707
MTZJ30DTA
D708
MTZJ15CTA
RL601
D604
RVD1SS133TA
D607
RVD1SS133TA
D601
SB360L6508
D602
SB360L6508
(R6)
(L6)
(C3)
(S3)
TP
CN905
CN901
CN904
CENTER IN
+5.6V
CENTRE OUT
-14V
ROUT
LOUT
SIGNAL GND
SURR OUT
HP GND
HPL
HPR
FL AC
FL AC
-22V
LIMITTER
AF MUTE
FM STEREO
SUR CE
SUR/OSD DT
SUR/OSD CK
MAIN LIN
MAIN RIN
SURR SOUT
PGND
TO B PANEL CIRCUIT (CP905) (PAGE 38)
TO B PANEL CIRCUIT (CP901) (PAGE 38)
TO B PANEL CIRCUIT (CP904) (PAGE 36)

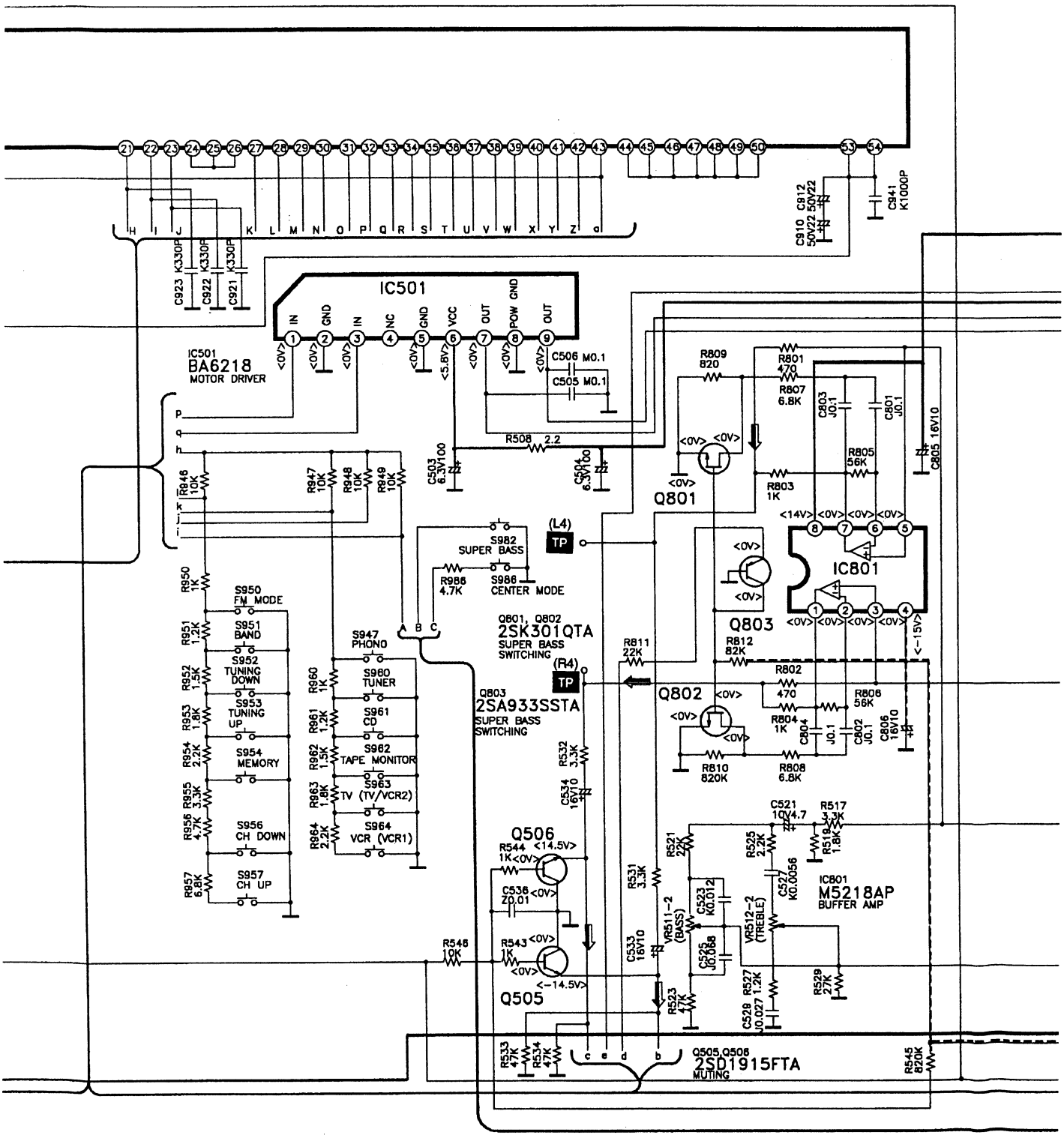

IC602
RSN3305-P
POWER AMP
IC602
Q651
UN4119TA
RELAY SWITCH
Q771,Q772,Q774,Q775,Q776
2SA1309ARTA
FAN MOTOR DRIVE
Q773
2SB621ARTA
REGULATOR
Q771
Q772
Q775
Q774
Q776
Q773
(C4)
(S4)
TP
TP
CP1001
CP1002
LOUT
ROUT
GND
SUR COUT
+14V
S/C SP
-14V
LIN
RIN
SURR SOUT
GND
SUR/OSD_CK
SUR/OSD_DT
SUR_CE
TO K
PRO LOGIC CIRCUIT
(CN1001)
(PAGE 29)
TO K
PRO LOGIC CIRCUIT
(CN1002)
(PAGE 29)


JK601
LCH
FRONT SPEAKERS
RCH
LCH
CENTRE SPEAKERS
RCH
JK603
RCH
SURROUND SPEAKERS
LCH
(C5)
TP
(S5)
TP
RL603
D654
RVD1SS133TA
R678 390
E601
CP752
BP5.6V
RELAY
GND
GND
CN701
CP771
FAN MOTOR
LATCH
SOUT
-VCC LOW
+VCC LOW
COUT
-VCC HI
+VCC HI
-DI SENSE
+DI SENSE
-VD
+VD
D651 SB360L6508
D652 SB360L6508
D660 MTZJ6R8BTA
D661 MTZJ6R8BTA
D662 MTZJ6R8BTA
D659 MTZJ6R8BTA
D701-D704 IN5402BM21
D721-D724 IN5402BM21
R730 5.8
C671 100V10
C702 250V0.1
C703 100V7500
C721 250V0.1
C657 K10P
C658 K10P
R658 56K
R657 56K
R675 56K
R668 150K
R685 150K
R697 220
R698 220
R730 5.8

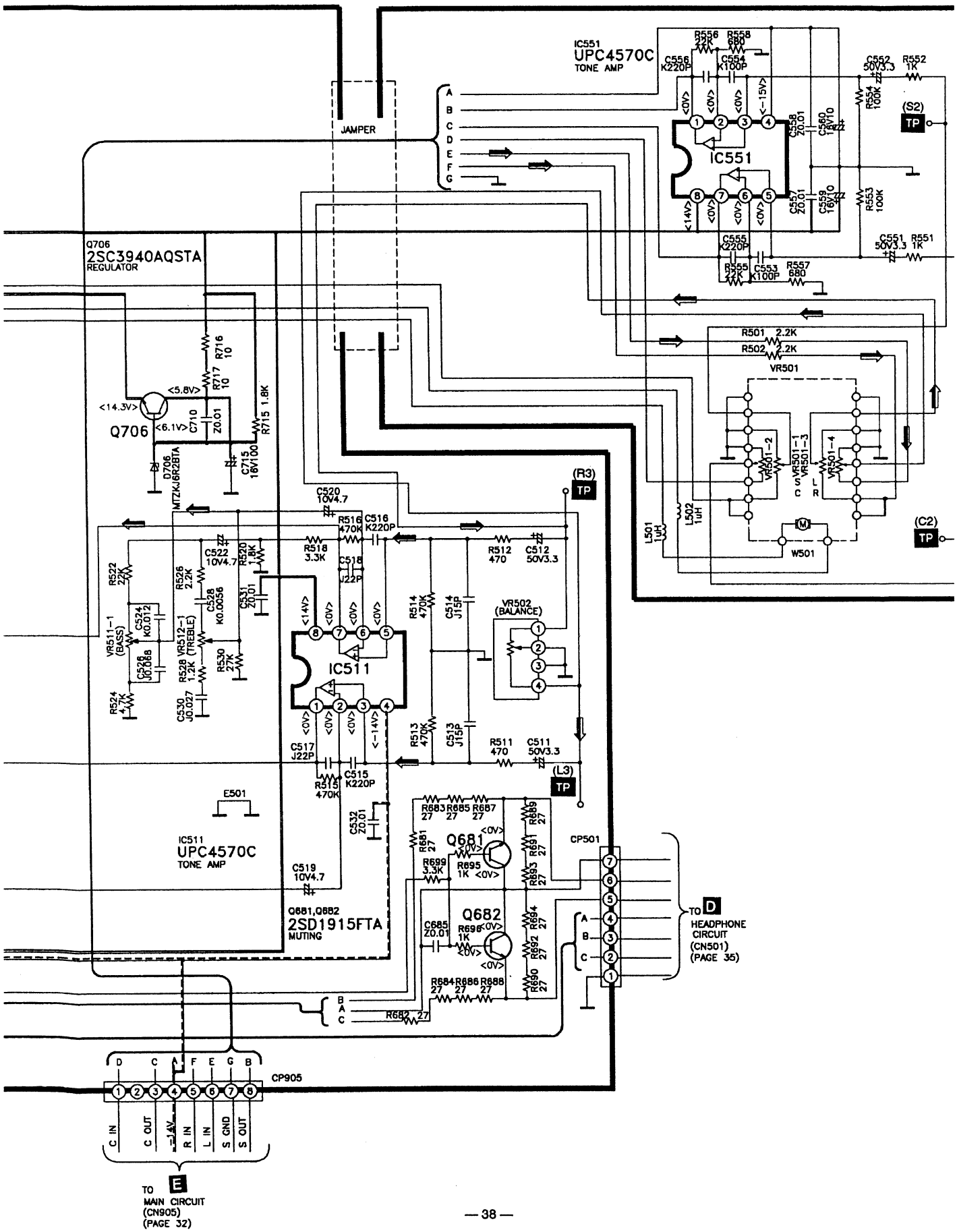

F POWER CIRCUIT
<6V>
<13V>
C757 16V10
C754 Z0.01
C753 25V1000
D751~D754 1SR35200TB
T751
D756 MTZJ6R8BTA
<6.6V>
C755 16V47
R754 1K
D753
D754
D752
C752 Z0.01
D751
D755 RVD1SS133TA
RL751
Q752
Q752 2SC3940AQSTA REGULATOR
C751 M0.001
Q751
<4.7V>
<0.14V>
Q751 UN421FTA RELAY DRIVE
<0V>
R752 1K
F1 125V 7A
CN752
BP5.6V
RELAY
GND
GND
JK792 AC OUTLET (SWITCHED)
T701
JK791
AC IN 120V 60Hz
Z751
R751 3.3M
CN751
D HEADPHONE CIRCUIT
H OPERATION CIRCUIT
CN501
CN502
CP502
TO B PANEL CIRCUIT (CP501) (PAGE 38)
HP601
R980 1K
S949 POWER
R981 1.2K
S980 SPEAKER
R982 1.5K
R983 1.8K
S983 DPL/SFC ON/OFF
R984 2.2K
S984 PROLOGIC MODE
R985 3.3K
S985 SFC MODE

B PANEL CIRCUIT




IC501
BA6218
MOTOR DRIVER
IC801
M5218AP
BUFFER AMP
Q801
Q802
Q803
2SA933SSTA
SUPER BASS SWITCHING
Q801, Q802
2SK301QTA
SUPER BASS SWITCHING
Q505
Q506
Q505,Q506
2SD1915FTA
MUTING
S950 FM MODE
S951 BAND
S952 TUNING DOWN
S953 TUNING UP
S954 MEMORY
S956 CH DOWN
S957 CH UP
S947 PHONO
S960 TUNER
S961 CD
S962 TAPE MONITOR
S963 TV (TV/VCR2)
S964 VCR (VCR1)
S982 SUPER BASS
S986 CENTER MODE
VR511-2 (BASS)
VR512-2 (TREBLE)

C VOLUME CIRCUIT



■ Terminal Guide of ICs, Transistors and Diodes

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 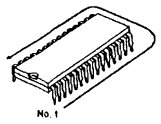 </td>
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 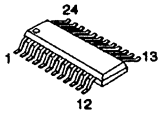 </td>
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 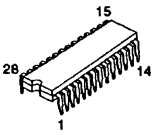 </td>
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 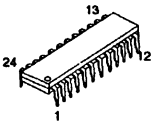 </td>
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 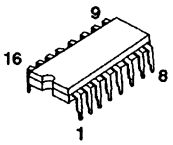 </td>
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 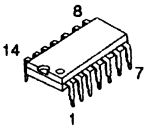 </td>
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 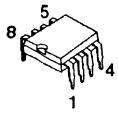 </td>
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 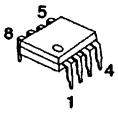 </td>
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 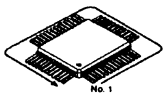 </td>
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 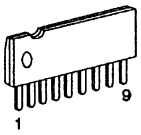 </td>
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 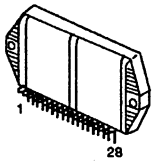 </td>
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 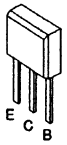 </td>
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 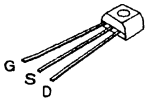 </td>
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 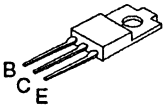 </td>
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 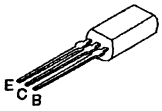 </td>
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 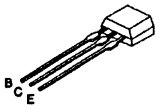 </td>
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 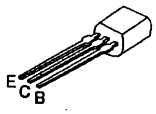 </td>
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 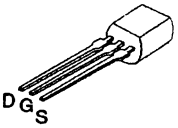 </td>
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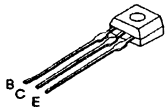
<td colspan="2"> 
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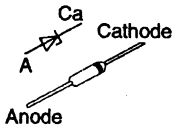
<td colspan="2"> 
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 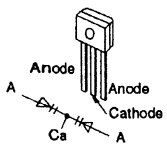 </td>
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 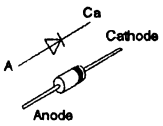 </td>
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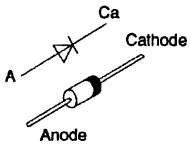
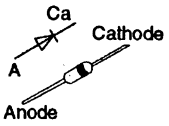
  </td>
<td colspan="3"> 
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MA167ATA
MA700ATA
RVD1SS133TA</td>
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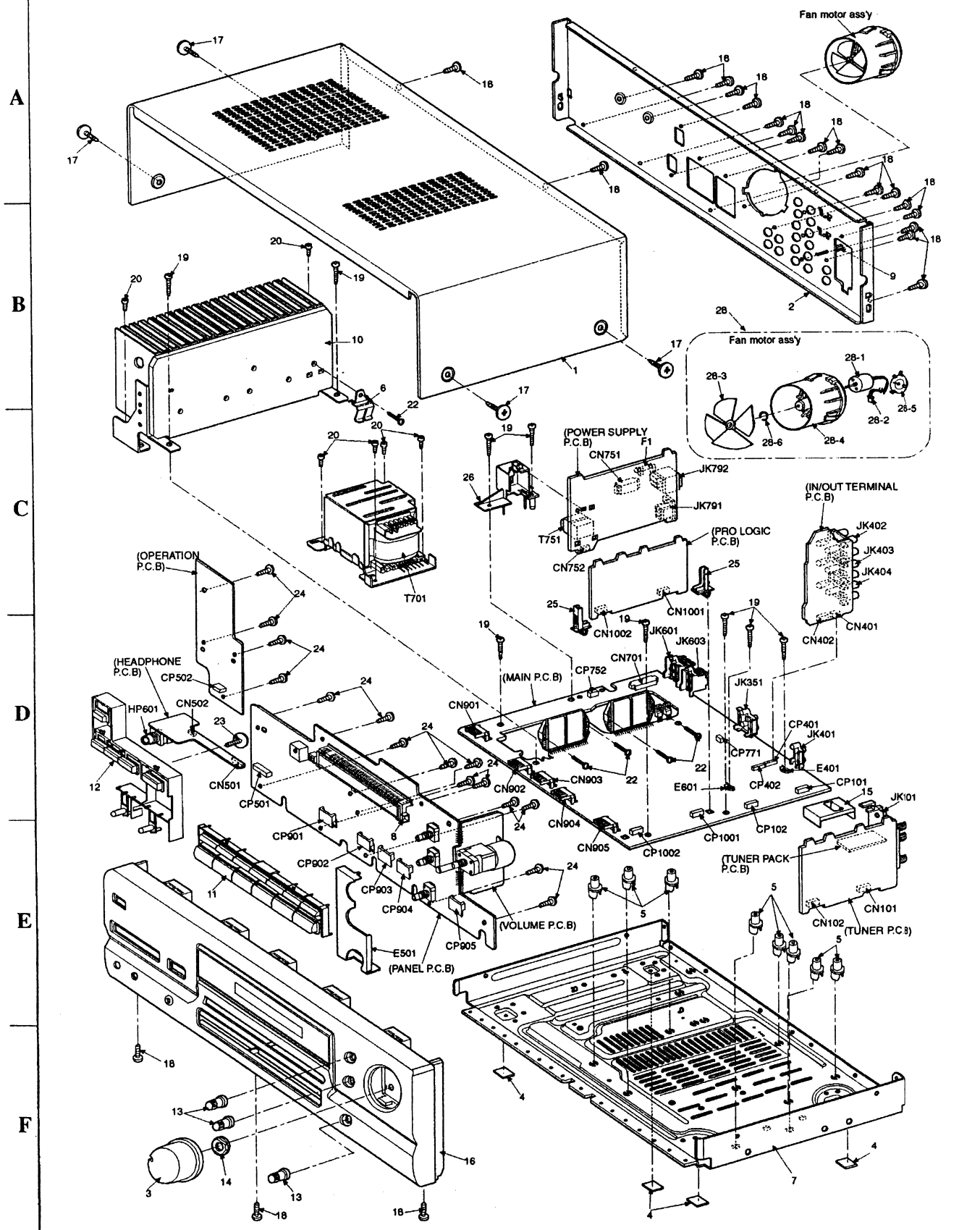
■ Cabinet Parts Location



■ Replacement Parts List

Notes: • Important safety notice :
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
• [M] in Remarks column indicates parts that are supplied by **MESA**.
• [MAV] in Remarks column indicates parts that are supplied by **MAV**.

Ref No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RKM0325B-K	CABINET	[MAV]
2	RGR0237B-A	REAR PANEL	[MAV]
3	RGW0243B-K	VOLUME KNOB	[MAV]
4	SKL293	LEG CUSHION	
5	RKQ0089	PCB HOLDER	
6	RMC0158-S	TR FIXTURE	[M]
7	RMK0313	BOTTOM CHASSIS	[MAV]
8	RMN0372	FL HOLDER	[MAV]
9	SNE2123	EARTH TERMINAL	
10	RXX0166	HEAT SINK UNIT	[MAV]
11	RGU1365A-K	SELECTOR BUTTON	[MAV]
12	RGU1366-K	FUNCTION BUTTON	[MAV]
13	RGW0216-K	TONE KNOB	
14	RHN90001	M9 NUT	
15	RSC0027	TUNER PACK	
16	RFKGSAG76PPK	FRONT PANEL ASS'Y	[MAV]
17	SNE2129-1	SCREW (CABINET)	
18	XTBS3+8JFZ1	SCREW (REAR PANEL)	
19	XTB3+20JFZ	SCREW (MAIN PCB)	
20	XTB3+8FFZ	SCREW (HEAT SINK)	
22	XTW3+15T	SCREW (HIC FIXTURE)	
23	RHD26016	SCREW (HEADPHONE)	
24	XTBS26+10J	SCREW (PANEL PCB)	
25	RMN0203	PCB SUPPORT	
26	RMN0312	TRANS HOLDER	
28	RYQ0173-K	FAN UNIT	[MAV]
28-1	MDN-4RB4MRC	MOTOR	
28-2	REX0811	MOTOR WIRE	[MAV]
28-3	SHE232	64MM PROPELLER	
28-4	SHE233-1	FAN CASE	
28-5	SHE234	FAN CASE COVER	
28-6	SUS271	MOTOR SPRING	
		INTEGRATED CIRCUITS	
IC101	LA1832A	IC, IF/MPX	
IC102	LC7218	IC, PLL	
IC351	NJM2279D	IC, VIDEO SELECTOR	
IC401	TC9163N	IC, SELECTOR	
IC402	M5218AP	IC, BUFFER AMP	
IC451	AN6558-F	IC, PHONO EQ AMP	[M]
IC501	BA6218	IC, MOTOR DRIVER	
IC511	UPC4570C	IC, TONE CONTROL	
IC551	UPC4570C	IC, TONE CONTROL	
IC601	RSN3305-P	IC, HIC	[MAV]⚠
IC602	RSN3305-P	IC, HIC	[MAV]⚠
IC801	M5218AP	IC, BUFFER AMP	
IC901	UPD78043A041	IC, MICRO COMPUTER	[MAV]
IC1001	LA2785	IC, P. LOGIC DECODER	
IC1002	LV1010N	IC, DIGITAL DELAY	
IC1003	TC9214P	IC, SELECTOR SWITCH	
		TRANSISTORS	
Q1	2SK544F-AC	TRANSISTOR	
Q2	2SC2786MTA	TRANSISTOR	
Q3	2SC2787FL1TA	TRANSISTOR	
Q4	2SC2787FL1TA	TRANSISTOR	
Q101	2SC2787LTA	TRANSISTOR	
Q103	2SC2785FETA	TRANSISTOR	
Q104	2SC2785FETA	TRANSISTOR	
Q106	UN411FTA	TRANSISTOR	
Q107	2SC3311ARTA	TRANSISTOR	
Q108	2SC3311ARTA	TRANSISTOR	
Q351	2SD592ARTA	TRANSISTOR	⚠
Q352	2SB621ARTA	TRANSISTOR	⚠
Q505	2SD1915FTA	TRANSISTOR	
Q506	2SD1915FTA	TRANSISTOR	
Q551	2SD1915FTA	TRANSISTOR	
Q552	2SD1915FTA	TRANSISTOR	
Q581	2SA1309ARTA	TRANSISTOR	
Q582	2SA1309ARTA	TRANSISTOR	
Q583	2SC3311ARTA	TRANSISTOR	
Q584	2SC3311ARTA	TRANSISTOR	
Q585	2SA1309ARTA	TRANSISTOR	
Q601	UN4119TA	TRANSISTOR	
Q651	UN4119TA	TRANSISTOR	
Q681	2SD1915FTA	TRANSISTOR	
Q682	2SD1915FTA	TRANSISTOR	
Q701	2SD2374PQAU	TRANSISTOR	⚠
Q703	2SC3311ARTA	TRANSISTOR	⚠
Q704	2SC3311ARTA	TRANSISTOR	⚠
Q705	2SC3311ARTA	TRANSISTOR	⚠
Q706	2SC3940AQSTA	TRANSISTOR	
Q707	2SB621ARTA	TRANSISTOR	⚠
Q708	2SB1548PQAU	TRANSISTOR	⚠
Q751	UN421FTA	TRANSISTOR	
Q752	2SC3940AQSTA	TRANSISTOR	⚠
Q771	2SA1309ARTA	TRANSISTOR	
Q772	2SA1309ARTA	TRANSISTOR	
Q773	2SB621ARTA	TRANSISTOR	⚠
Q774	2SA1309ARTA	TRANSISTOR	
Q775	2SA1309ARTA	TRANSISTOR	
Q776	2SA1309ARTA	TRANSISTOR	
Q801	2SK301QTA	TRANSISTOR	[M]
Q802	2SK301QTA	TRANSISTOR	[M]
Q803	2SA933SSTA	TRANSISTOR	
Q901	RVTDTC114YST	TRANSISTOR	
Q902	2SA933SSTA	TRANSISTOR	
Q1001	2SC3940AQSTA	TRANSISTOR	⚠
Q1081	2SA1309ARTA	TRANSISTOR	
		DIODES	
D1	SVC211SPA-AL	DIODE	
D2	SVC211SPA-AL	DIODE	
D3	SVC211SPA-AL	DIODE	
D101	MTZJ5R1BTA	DIODE	
D102	RVD1SS133TA	DIODE	
D351	MTZJ5R6BTA	DIODE	
D352	MTZJ5R6BTA	DIODE	
D401	MTZJ7R5CTA	DIODE	
D583	MTZJ3R0ATA	DIODE	[MAV]
D584	MTZJ3R0ATA	DIODE	[MAV]
D601	SB360L6508	DIODE	⚠
D602	SB360L6508	DIODE	⚠
D604	RVD1SS133TA	DIODE	
D605	MTZJ6R2BTA	DIODE	
D606	RVD1SS133TA	DIODE	
D607	RVD1SS133TA	DIODE	
D651	SB360L6508	DIODE	⚠
D652	SB360L6508	DIODE	⚠
D654	RVD1SS133TA	DIODE	
D655	MTZJ6R2BTA	DIODE	

Ref No.	Part No.	Part Name & Description	Remarks
D656	RVD1SS133TA	DIODE	
D657	RVD1SS133TA	DIODE	
D659	MTZJ6R8BTA	DIODE	
D660	MTZJ6R8BTA	DIODE	
D661	MTZJ6R8BTA	DIODE	
D662	MTZJ6R8BTA	DIODE	
D701	1N5402BM21	DIODE	⚠
D702	1N5402BM21	DIODE	⚠
D703	1N5402BM21	DIODE	⚠
D704	1N5402BM21	DIODE	⚠
D705	MTZJ6R2BTA	DIODE	⚠
D706	MTZJ6R2BTA	DIODE	
D707	MTZJ30DTA	DIODE	⚠
D708	MTZJ15CTA	DIODE	⚠
D721	1N5402BM21	DIODE	⚠
D722	1N5402BM21	DIODE	⚠
D723	1N5402BM21	DIODE	⚠
D724	1N5402BM21	DIODE	⚠
D751	1SR35200TB	DIODE	⚠
D752	1SR35200TB	DIODE	⚠
D753	1SR35200TB	DIODE	⚠
D754	1SR35200TB	DIODE	⚠
D755	RVD1SS133TA	DIODE	⚠
D756	MTZJ6R8BTA	DIODE	⚠
D771	RVD1SS133TA	DIODE	
D772	MTZJ8R2BTA	DIODE	[M]
D773	RVD1SS133TA	DIODE	
D901	1SS291TA	DIODE	
D903	MTZJ4R7BTA	DIODE	
D907	MA167ATA	DIODE	
D908	MA167ATA	DIODE	
D921	RVD1SS133TA	DIODE	
D923	RVD1SS133TA	DIODE	
D924	MTZJ3R9ATA	DIODE	
D1001	MTZJ10CTA	DIODE	
D1002	MA700ATA	DIODE	
		VARIABLE RESISTORS	
VR501	RRV24B02B16A	VR, VOLUME	[MAV]
VR502	EVJ02QF04G15	VR, BALANCE	
VR511	EVJYA1FA5C15	VR, BASS	
VR512	EVJYA1FA5C15	VR, TREBLE	
		SWITCHES	
S947	EVQ21405R	SW, PHONE	
S949	EVQ21405R	SW, POWER	
S950	EVQ21405R	SW, FM MODE	

Ref No.	Part No.	Part Name & Description	Remarks
S951	EVQ21405R	SW, BAND	
S952	EVQ21405R	SW, TUNING DOWN	
S953	EVQ21405R	SW, TUNING UP	
S954	EVQ21405R	SW, MEMORY	
S956	EVQ21405R	SW, PRESET DOWN	
S957	EVQ21405R	SW, PRESET UP	
S960	EVQ21405R	SW, TUNER	
S961	EVQ21405R	SW, CD	
S962	EVQ21405R	SW, TAPE	
S963	EVQ21405R	SW, TV	
S964	EVQ21405R	SW, VCR	
S980	EVQ21405R	SW, SPEAKER	
S982	EVQ21405R	SW, SUPER BASS	
S983	EVQ21405R	SW, DPL	
S984	EVQ21405R	SW, PRO	
S985	EVQ21405R	SW, SFC	
S986	EVQ21405R	SW, CENTER MODE	
		CONNECTORS	
CN101	RJU057W007	CONNECTOR (7P)	
CN102	RJU057W007	CONNECTOR (7P)	
CN401	RJU100W07	CONNECTOR (7P)	[MAV]
CN402	RJU100W07	CONNECTOR (7P)	[MAV]
CN501	RJU100W07	CONNECTOR (7P)	[MAV]
CN502	RJU100W04	SOCKET (4P)	[MAV]
CN701	SJS702-1	CONNECTOR (7P)	
CN751	SJS305-1	CONNECTOR (3P)	
CN752	RJU100W04	SOCKET (4P)	[MAV]
CN901	RJU003K008M1	BOARD IN CONNECTOR	
CN902	RJU003K008M1	BOARD IN CONNECTOR	
CN903	RJU003K008M1	BOARD IN CONNECTOR	
CN904	RJU003K008M1	BOARD IN CONNECTOR	
CN905	RJU003K008M1	BOARD IN CONNECTOR	
CN1001	RJU100W07	CONNECTOR (7P)	[MAV]
CN1002	RJU100W07	CONNECTOR (7P)	[MAV]
CP101	RJT057W007-1	CONNECTOR (7P)	
CP102	RJT057W007-1	CONNECTOR (7P)	
CP401	RJT100W07	CONNECTOR (7P)	[MAV]
CP402	RJT100W07	CONNECTOR (7P)	[MAV]
CP501	RJT100W07	CONNECTOR (7P)	[MAV]
CP502	RJT100W04	CONNECTOR (4P)	[MAV]
CP752	RJT100W04	CONNECTOR (4P)	[MAV]
CP771	SJT3213	CONNECTOR (FAN)	
CP901	RJT003K008M1	CONNECTOR (8P)	
CP902	RJT003K008M1	CONNECTOR (8P)	
CP903	RJT003K008M1	CONNECTOR (8P)	
CP904	RJT003K008M1	CONNECTOR (8P)	
CP905	RJT003K008M1	CONNECTOR (8P)	

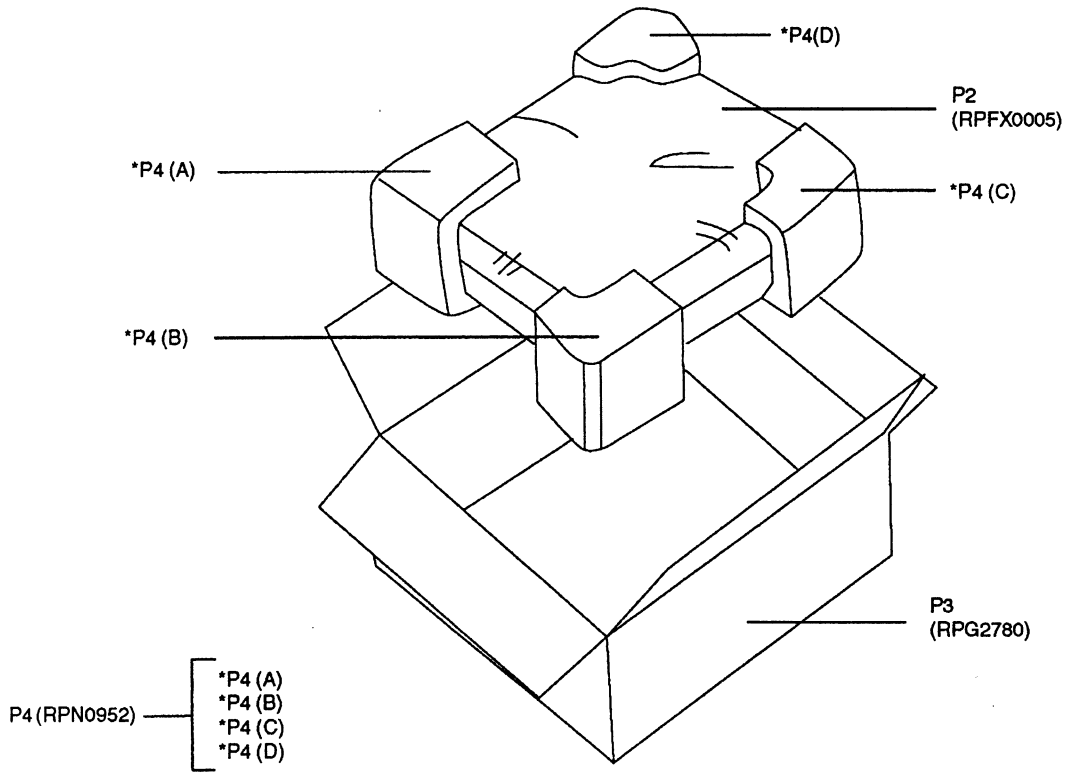
Ref No.	Part No.	Part Name & Description	Remarks
CP1001	RJT100W07	CONNECTOR (7P)	[MAV]
CP1002	RJT100W07	CONNECTOR (7P)	[MAV]
		COILS & TRANSFORMERS	
L1	RLQZP1R2KT-Y	INDUCTOR	
L2	RLQZPR47KT-Y	INDUCTOR	
L101	ELESN1R5MA	CHOKE COIL	
L103	ELEXTR47MA9	CHOKE COIL	
L501	RLQZP1R0KT-Y	AXIAL COIL	
L502	RLQZP1R0KT-Y	AXIAL COIL	
L601	RLQYR73M	CHOKE COIL	
L602	RLQYR73M	CHOKE COIL	
L651	RLQYR73M	CHOKE COIL	
L652	RLQYR73M	CHOKE COIL	
L751	RLQB101KTA-Y	CHOKE COIL	
L901	RLQB101KTA-Y	CHOKE COIL	
L1051	RLQB101KTA-Y	CHOKE COIL	
T701	RTP1P5C024-V	POWER TRANSFORMER	[MAV] ⚠
T751	RTP1H5C001-V	POWER TRANSFORMER	⚠
		COMPONENT COMBINATION	
Z101	RLA2Z002M-T	AM ANT. COIL	
Z102	RLI2Z006M-T	AM IFT	
Z751	ERZV10V511CS	ZNR	⚠
Z891	RCDSPS4242N	REMOTE SENSOR	
		CERAMIC FILTERS	
CF201	RLFFETMGD01L	CERAMIC FILTER	
CF202	RLFFETMGD01L	CERAMIC FILTER	
CF901	RVBCST4R00MT	CERAMIC CAP.	
CF1051	EF0EC8004T4	CERAMIC OSCILLATOR	
		OSCILLATORS	
X101	RSXZ456KM07M	CERAMIC OSCILLATOR	
X102	RLFDGTD011	FM RESONATOR	
X103	SVQ49U722T-S	CRYSTAL OSCILLATOR	
		DISPLAY TUBE	
FL901	RSL0213-F	FL DISPLAY	[MAV]
		FUSE	
F1	XBA1C70NBAU	FUSE	[MAV] ⚠

Ref No.	Part No.	Part Name & Description	Remarks
		FUSE HOLDERS	
FC701	EYF52BC	FUSE HOLDER	
FC702	EYF52BC	FUSE HOLDER	
		JACKS	
JK101	RJH4405	JK, ANT TERMINAL	
JK351	SJF3069-3N	JK, RCA PIN	
JK401	SJF3068-7N	JK, RCA TERMINAL	
JK402	SJF3069N	JK, LINE IN	
JK403	SJF3069N	JK, LINE IN	
JK404	SJF3069N	JK, LINE IN	
JK601	RJH5601	JK, SP TERMINAL	

Ref No	Part No.	Part Name & Description	Remarks
JK603	RJR0054	JK, SP TERMINAL	
JK791	SJS9237	JK, AC INLET	⚠
JK792	RJS2A2302	JK, AC OUTLET	⚠
		RELAYS	
RL601	RSY0013M-0	24V RELAY	
RL603	RSY0013M-0	24V RELAY	
RL751	RSY0019M-0	12V TV-5 RELAY	⚠
		HEADPHONE	
HP601	RJJ63TS01	JK, HEADPHONE	

Ref No	Part No.	Part Name & Description	Remarks
		EARTH TERMINAL	
E401	SNE1004-2	EARTH TERMINAL	
E501	RSC0445	TONE SHIELD PLATE	[MAV]
E601	SNE1004-2	EARTH TERMINAL	
		PACKING MATERIALS	
P2	RPFX0005	MIRAMAT BAG	[M]
P3	RPG2780	PACKING CASE	[MAV]
P4	RPN0952	POLYFOAM	[MAV]

■ Packaging



■ Resistors & Capacitors

Notes : • Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
- Resistors values are in ohms, unless specified otherwise, 1K=1,000(OHM), 1M=1,000K(OHM)
- [M] in Remarks column indicates parts that are supplied by **MESA**.
- [MAV] in Remarks column indicates parts that are supplied by **MAV**.

Ref No.	Part No.	Values & Remarks
	RESISTORS	
R1	ERDS2TJ104T	100K 1/4W
R2	ERDS2TJ104T	100K 1/4W
R3	ERDS2TJ221T	220 1/4W
R4	ERDS2TJ104T	100K 1/4W
R5	ERDS2TJ564T	560K 1/4W
R6	ERDS2TJ391T	390 1/4W
R7	ERDS2TJ272T	2.7K 1/4W
R8	ERDS2TJ684T	680K 1/4W
R9	ERDS2TJ391T	390 1/4W
R10	ERDS2TJ391T	390 1/4W
R11	ERDS2TJ684T	680K 1/4W
R103	ERDS2TJ151T	150 1/4W
R104	ERDS2TJ102T	1K 1/4W
R105	ERDS2TJ471T	470 1/4W
R106	ERDS2TJ224T	220K 1/4W
R107	ERDS2TJ471T	470 1/4W
R110	ERDS2TJ102T	1K 1/4W
R112	ERDS2TJ104T	100K 1/4W
R113	ERDS2TJ103T	10K 1/4W
R114	ERDS2TJ562T	5.6K 1/4W
R115	ERDS2TJ561T	560 1/4W
R116	ERDS2TJ102T	1K 1/4W
R117	ERDS2TJ104T	100K 1/4W
R118	ERDS2TJ562T	5.6K 1/4W
R119	ERDS2TJ822T	8.2K 1/4W
R120	ERDS2TJ473T	47K 1/4W
R121	ERDS2TJ332T	3.3K 1/4W
R122	ERDS2TJ272T	2.7K 1/4W
R124	ERDS2TJ271T	270 1/4W
R125	ERDS2TJ472T	4.7K 1/4W
R126	ERDS2TJ472T	4.7K 1/4W
R127	ERDS2TJ103T	10K 1/4W
R128	ERDS2TJ820T	82 1/4W
R129	ERDS2TJ473T	47K 1/4W
R130	ERDS2TJ102T	1K 1/4W
R131	ERDS2TJ102T	1K 1/4W
R132	ERDS2TJ103T	10K 1/4W
R133	ERDS2TJ102T	1K 1/4W
R134	ERDS2TJ102T	1K 1/4W
R135	ERDS2TJ102T	1K 1/4W
R136	ERDS2TJ102T	1K 1/4W
R137	ERDS2TJ102T	1K 1/4W
R139	ERDS2TJ272T	2.7K 1/4W
R140	ERDS2TJ272T	2.7K 1/4W
R141	ERDS2TJ103T	10K 1/4W
R142	ERDS2TJ103T	10K 1/4W
R143	ERDS2TJ222T	2.2K 1/4W
R144	ERDS2TJ222T	2.2K 1/4W
R145	ERDS2TJ102T	1K 1/4W
R146	ERDS2TJ102T	1K 1/4W
R147	ERDS2TJ474T	470K 1/4W
R148	ERDS2TJ474T	470K 1/4W
R149	ERDS2TJ680T	68 1/4W
R171	ERDS2TJ102T	1K 1/4W
R172	ERDS2TJ102T	1K 1/4W
R173	ERDS2TJ471T	470 1/4W
R175	ERDS2TJ102T	1K 1/4W
R176	ERDS2TJ391T	390 1/4W
R351	ERDS2TJ680T	68 1/4W
R352	ERDS2TJ680T	68 1/4W
R353	ERDS2TJ103T	10K 1/4W
R354	ERDS2TJ103T	10K 1/4W
R355	ERDS2TJ750T	75 1/4W
R356	ERDS2TJ750T	75 1/4W
R357	ERDS2TJ102T	1K 1/4W
R358	ERDS2TJ102T	1K 1/4W
R359	ERDS2TJ182T	1.8K 1/4W
R360	ERDS2TJ182T	1.8K 1/4W
R361	ERD2FCVG220T	22 1/4W
R362	ERD2FCVG220T	22 1/4W
R401	ERDS2TJ102T	1K 1/4W
R402	ERDS2TJ102T	1K 1/4W
R405	ERDS2TJ102T	1K 1/4W
R406	ERDS2TJ102T	1K 1/4W
R407	ERDS2TJ102T	1K 1/4W
R408	ERDS2TJ102T	1K 1/4W
R409	ERDS2TJ102T	1K 1/4W
R410	ERDS2TJ102T	1K 1/4W
R411	ERDS2TJ102T	1K 1/4W
R412	ERDS2TJ102T	1K 1/4W
R413	ERDS2TJ102T	1K 1/4W
R414	ERDS2TJ102T	1K 1/4W
R415	ERDS2TJ102T	1K 1/4W
R416	ERDS2TJ102T	1K 1/4W
R417	ERDS2TJ473T	47K 1/4W
R418	ERDS2TJ473T	47K 1/4W
R419	ERDS2TJ104T	100K 1/4W
R420	ERDS2TJ104T	100K 1/4W
R421	ERDS2TJ104T	100K 1/4W
R422	ERDS2TJ104T	100K 1/4W
R423	ERDS2TJ102T	1K 1/4W
R424	ERDS2TJ102T	1K 1/4W
R425	ERDS2TJ103T	10K 1/4W
R426	ERDS2TJ103T	10K 1/4W
R427	ERDS2TJ103T	10K 1/4W
R440	ERDS1FVJ820T	82 1/2W
R441	ERDS2TJ473T	47K 1/4W
R442	ERDS2TJ473T	47K 1/4W
R443	ERDS2TJ330T	33 1/4W
R451	ERDS2TJ224T	220K 1/4W
R452	ERDS2TJ224T	220K 1/4W
R453	ERDS2TJ821T	820 1/4W
R454	ERDS2TJ821T	820 1/4W
R455	ERDS2TJ563T	56K 1/4W
R456	ERDS2TJ563T	56K 1/4W
R457	ERDS2TJ271T	270 1/4W
R458	ERDS2TJ271T	270 1/4W
R459	ERDS2TJ680T	68 1/4W
R460	ERDS2TJ680T	68 1/4W
R461	ERDS2TJ184T	180K 1/4W
R462	ERDS2TJ184T	180K 1/4W
R463	ERDS2TJ123T	12K 1/4W
R464	ERDS2TJ123T	12K 1/4W
R465	ERDS2TJ563T	56K 1/4W
R466	ERDS2TJ563T	56K 1/4W
R467	ERDS2TJ102T	1K 1/4W
R468	ERDS2TJ102T	1K 1/4W
R501	ERDS2TJ222T	2.2K 1/4W
R502	ERDS2TJ222T	2.2K 1/4W
R508	ERDS1FVJ2R2T	2.2 1/2W
R511	ERDS2TJ471T	470 1/4W
R512	ERDS2TJ471T	470 1/4W
R513	ERDS2TJ474T	470K 1/4W
R514	ERDS2TJ474T	470K 1/4W
R515	ERDS2TJ474T	470K 1/4W
R516	ERDS2TJ474T	470K 1/4W
R517	ERDS2TJ332T	3.3K 1/4W
R518	ERDS2TJ332T	3.3K 1/4W
R519	ERDS2TJ182T	1.8K 1/4W
R520	ERDS2TJ182T	1.8K 1/4W
R521	ERDS2TJ223T	22K 1/4W
R522	ERDS2TJ223T	22K 1/4W
R523	ERDS2TJ472T	4.7K 1/4W
R524	ERDS2TJ472T	4.7K 1/4W
R525	ERDS2TJ222T	2.2K 1/4W
R526	ERDS2TJ222T	2.2K 1/4W
R527	ERDS2TJ122T	1.2K 1/4W
R528	ERDS2TJ122T	1.2K 1/4W
R529	ERDS2TJ273T	27K 1/4W
R530	ERDS2TJ273T	27K 1/4W
R531	ERDS2TJ332T	3.3K 1/4W
R532	ERDS2TJ332T	3.3K 1/4W
R533	ERDS2TJ473T	47K 1/4W
R534	ERDS2TJ473T	47K 1/4W
R537	ERDS2TJ224T	220K 1/4W
R538	ERDS2TJ224T	220K 1/4W
R539	ERDS2TJ272T	2.7K 1/4W
R540	ERDS2TJ272T	2.7K 1/4W
R541	ERDS2TJ392T	3.9K 1/4W
R542	ERDS2TJ392T	3.9K 1/4W
R543	ERDS2TJ102T	1K 1/4W
R544	ERDS2TJ102T	1K 1/4W
R545	ERDS2TJ684T	680K 1/4W
R546	ERDS2TJ103T	10K 1/4W
R551	ERDS2TJ102T	1K 1/4W
R552	ERDS2TJ102T	1K 1/4W
R553	ERDS2TJ104T	100K 1/4W
R554	ERDS2TJ104T	100K 1/4W
R555	ERDS2TJ223T	22K 1/4W
R556	ERDS2TJ223T	22K 1/4W
R557	ERDS2TJ681T	680 1/4W
R558	ERDS2TJ681T	680 1/4W

Ref No.	Part No.	Values & Remarks
R561	ERDS2TJ332T	3.3K 1/4W
R562	ERDS2TJ332T	3.3K 1/4W
R564	ERDS2TJ103T	10K 1/4W
R565	ERDS2TJ102T	1K 1/4W
R566	ERDS2TJ102T	1K 1/4W
R583	ERDS2TJ102T	1K 1/4W
R584	ERDS2TJ102T	1K 1/4W
R585	ERDS2TJ102T	1K 1/4W
R586	ERDS2TJ102T	1K 1/4W
R587	ERDS2TJ102T	1K 1/4W
R588	ERDS2TJ102T	1K 1/4W
R589	ERDS2TJ472T	4.7K 1/4W
R590	ERDS2TJ473T	47K 1/4W
R591	ERDS2TJ222T	2.2K 1/4W
R592	ERDS2TJ222T	2.2K 1/4W
R601	ERDS2TJ102T	1K 1/4W
R602	ERDS2TJ102T	1K 1/4W
R603	ERDS2TJ563T	56K 1/4W
R604	ERDS2TJ563T	56K 1/4W
R605	ERDS2TJ182T	1.8K 1/4W
R606	ERDS2TJ182T	1.8K 1/4W
R607	ERDS2TJ563T	56K 1/4W
R608	ERDS2TJ563T	56K 1/4W
R609	ERDS2TJ470T	47 1/4W
R610	ERDS2TJ470T	47 1/4W
R611	ERDS1FVJ100T	10 1/2W
R612	ERDS1FVJ100T	10 1/2W
R613	ERDS2TJ102T	1K 1/4W
R614	ERDS2TJ102T	1K 1/4W
R615	ERDS2TJ184T	180K 1/4W
R616	ERDS2TJ154T	150K 1/4W
R617	ERDS2TJ473T	47K 1/4W
R618	ERDS2TJ473T	47K 1/4W
R619	ERDS2TJ223T	22K 1/4W
R620	ERD25FVJ220T	22 1/4W
R621	ERDS2TJ473T	47K 1/4W
R622	ERDS2TJ184T	180K 1/4W
R623	ERDS2TJ684T	680K 1/4W
R624	ERDS2TJ563T	56K 1/4W
R625	ERDS2TJ563T	56K 1/4W
R626	ERDS2TJ682T	6.8K 1/4W
R628	ERDS1FVJ391T	390 1/2W
R629	ERD25FVJ151T	150 1/4W
R630	ERD25FVJ121T	120 1/4W
R632	ERDS2TJ223T	22K 1/4W
R637	ERG1SJ101E	100 1W
R638	ERG1SJ101E	100 1W
R639	ERG1SJ101E	100 1W
R640	ERG1SJ101E	100 1W
R641	ERDS2TJ684T	680K 1/4W
R647	ERDS2TJ221T	220 1/4W
R648	ERDS2TJ221T	220 1/4W
R651	ERDS2TJ102T	1K 1/4W
R652	ERDS2TJ102T	1K 1/4W
R653	ERDS2TJ563T	56K 1/4W
R654	ERDS2TJ563T	56K 1/4W
R655	ERDS2TJ182T	1.8K 1/4W
R656	ERDS2TJ182T	1.8K 1/4W
R657	ERDS2TJ563T	56K 1/4W
R658	ERDS2TJ563T	56K 1/4W
R659	ERDS2TJ470T	47 1/4W
R660	ERDS2TJ470T	47 1/4W
R661	ERDS1FVJ100T	10 1/2W
R662	ERDS1FVJ100T	10 1/2W
R663	ERDS2TJ102T	1K 1/4W
R664	ERDS2TJ102T	1K 1/4W
R665	ERDS2TJ184T	180K 1/4W
R666	ERDS2TJ154T	150K 1/4W
R667	ERDS2TJ473T	47K 1/4W
R668	ERDS2TJ473T	47K 1/4W
R669	ERDS2TJ223T	22K 1/4W
R670	ERD25FVJ220T	22 1/4W
R671	ERDS2TJ473T	47K 1/4W
R672	ERDS2TJ224T	220K 1/4W
R673	ERDS2TJ684T	680K 1/4W
R674	ERDS2TJ563T	56K 1/4W
R675	ERDS2TJ563T	56K 1/4W
R676	ERDS2TJ682T	6.8K 1/4W
R678	ERDS1FVJ391T	390 1/2W
R679	ERD25FVJ470T	47 1/4W
R680	ERD25FVJ470T	47 1/4W
R681	ERDS2TJ270T	27 1/4W
R682	ERDS2TJ270T	27 1/4W
R683	ERDS2TJ270T	27 1/4W
R684	ERDS2TJ270T	27 1/4W
R685	ERDS2TJ270T	27 1/4W
R686	ERDS2TJ270T	27 1/4W
R687	ERDS2TJ270T	27 1/4W
R688	ERDS2TJ270T	27 1/4W
R689	ERDS2TJ270T	27 1/4W
R690	ERDS2TJ270T	27 1/4W
R691	ERDS2TJ270T	27 1/4W
R692	ERDS2TJ270T	27 1/4W
R693	ERDS2TJ270T	27 1/4W
R694	ERDS2TJ270T	27 1/4W
R695	ERDS2TJ102T	1K 1/4W
R696	ERDS2TJ102T	1K 1/4W
R697	ERDS2TJ221T	220 1/4W
R698	ERDS2TJ221T	220 1/4W
R699	ERDS2TJ332T	3.3K 1/4W
R703	ERDS1FVJ3R9T	3.9 1/2W
R704	ERDS1FVJ3R9T	3.9 1/2W
R705	ERDS2TJ472T	4.7K 1/4W
R706	ERDS2TJ102T	1K 1/4W
R707	ERD25FVJ221T	220 1/4W
R708	ERDS2TJ472T	4.7K 1/4W
R709	ERDS2TJ1R5T	1.5 1/4W
R710	ERDS2TJ1R5T	1.5 1/4W
R711	ERDS2TJ752T	7.5K 1/4W
R712	ERDS2TJ682T	6.8K 1/4W
R715	ERDS2TJ182T	1.8K 1/4W
R716	ERDS1FVJ100T	10 1/2W
R717	ERDS1FVJ100T	10 1/2W
R721	ERDS1FVJ221T	220 1/2W
R722	ERDS2TJ822T	8.2K 1/4W
R723	ERDS1FVJ100T	10 1/2W
R724	ERDS1FVJ100T	10 1/2W
R725	ERDS2TJ122T	1.2K 1/4W
R726	ERD25FVJ331T	330 1/4W
R727	ERDS1FVJ681T	680 1/2W
R730	ERDS1FVJ5R6T	5.6 1/2W
R751	ERC12ZGK335D	3.3M 1/2W ⚠
R752	ERDS2TJ102T	1K 1/4W
R754	ERDS2TJ102T	1K 1/4W
R772	ERDS2TJ104T	100K 1/4W
R773	ERDS2TJ103T	10K 1/4W
R774	ERDS2TJ223T	22K 1/4W
R775	ERDS2TJ472T	4.7K 1/4W
R777	ERDS2TJ150T	15 1/4W
R778	ERDS2TJ222T	2.2K 1/4W
R779	ERDS2TJ103T	10K 1/4W
R780	ERDS2TJ473T	47K 1/4W
R781	ERDS2TJ473T	47K 1/4W
R782	ERDS2TJ153T	15K 1/4W
R783	ERDS2TJ103T	10K 1/4W
R784	ERDS2TJ335T	3.3M 1/4W
R791	ERDS2TJ223T	22K 1/4W
R792	ERDS2TJ223T	22K 1/4W
R795	ERDS2TJ223T	22K 1/4W
R796	ERDS2TJ223T	22K 1/4W
R797	ERDS2TJ682T	6.8K 1/4W
R801	ERDS2TJ471T	470 1/4W
R802	ERDS2TJ471T	470 1/4W
R803	ERDS2TJ102T	1K 1/4W
R804	ERDS2TJ102T	1K 1/4W
R805	ERDS2TJ563T	56K 1/4W
R806	ERDS2TJ563T	56K 1/4W
R807	ERDS2TJ682T	6.8K 1/4W
R808	ERDS2TJ682T	6.8K 1/4W
R809	ERDS2TJ824T	820K 1/4W
R810	ERDS2TJ824T	820K 1/4W
R811	ERDS2TJ223T	22K 1/4W
R812	ERDS2TJ823T	82K 1/4W
R901	ERDS2TJ102T	1K 1/4W
R906	ERDS2TJ104T	100K 1/4W
R907	ERDS2TJ104T	100K 1/4W
R908	ERDS2TJ104T	100K 1/4W
R909	ERDS2TJ104T	100K 1/4W
R910	ERDS2TJ102T	1K 1/4W
R911	ERDS2TJ104T	100K 1/4W
R912	ERDS2TJ103T	10K 1/4W
R914	ERDS2TJ274T	270K 1/4W
R917	ERDS2TJ103T	10K 1/4W
R920	ERDS2TJ271T	270 1/4W
R921	ERDS2TJ121T	120 1/4W
R922	ERDS2TJ472T	4.7K 1/4W
R929	ERDS2TJ101T	100 1/4W
R930	ERDS2TJ101T	100 1/4W
R931	ERDS2TJ221T	220 1/4W
R932	ERDS2TJ102T	1K 1/4W
R936	ERDS2TJ102T	1K 1/4W
R937	ERDS2TJ102T	1K 1/4W
R946	ERDS2TJ103T	10K 1/4W
R947	ERDS2TJ103T	10K 1/4W
R948	ERDS2TJ103T	10K 1/4W
R949	ERDS2TJ103T	10K 1/4W
R950	ERDS2TJ102T	1K 1/4W
R951	ERDS2TJ122T	1.2K 1/4W
R952	ERDS2TJ152T	1.5K 1/4W
R953	ERDS2TJ182T	1.8K 1/4W
R954	ERDS2TJ222T	2.2K 1/4W
R955	ERDS2TJ332T	3.3K 1/4W
R956	ERDS2TJ472T	4.7K 1/4W
R957	ERDS2TJ682T	6.8K 1/4W
R960	ERDS2TJ102T	1K 1/4W
R961	ERDS2TJ122T	1.2K 1/4W
R962	ERDS2TJ152T	1.5K 1/4W
R963	ERDS2TJ182T	1.8K 1/4W
R964	ERDS2TJ222T	2.2K 1/4W
R980	ERDS2TJ102T	1K 1/4W
R981	ERDS2TJ122T	1.2K 1/4W
R982	ERDS2TJ152T	1.5K 1/4W

Ref No.	Part No.	Values & Remarks
R983	ERDS2TJ182T	1.8K 1/4W
R984	ERDS2TJ222T	2.2K 1/4W
R985	ERDS2TJ332T	3.3K 1/4W
R986	ERDS2TJ472T	4.7K 1/4W
R1001	ERDS2TJ102T	1K 1/4W
R1002	ERDS2TJ102T	1K 1/4W
R1003	ERDS2TJ102T	1K 1/4W
R1004	ERDS2TJ102T	1K 1/4W
R1005	ERDS2TJ203T	20K 1/4W
R1007	ERDS2TJ473T	47K 1/4W
R1008	ERDS2TJ473T	47K 1/4W
R1009	ERDS2TJ332T	3.3K 1/4W
R1010	ERDS2TJ332T	3.3K 1/4W
R1011	ERDS2TJ332T	3.3K 1/4W
R1012	ERDS2TJ102T	1K 1/4W
R1013	ERDS2TJ103T	10K 1/4W
R1014	ERDS2TJ104T	100K 1/4W
R1051	ERDS2TJ393T	39K 1/4W
R1052	ERDS2TJ105T	1M 1/4W
R1053	ERDS2TJ102T	1K 1/4W
R1055	ERDS2TJ224T	220K 1/4W
R1056	ERDS2TJ153T	15K 1/4W
R1061	ERDS2TJ222T	2.2K 1/4W
R1062	ERDS2TJ273T	27K 1/4W
R1063	ERDS2TJ332T	3.3K 1/4W
R1081	ERDS2TJ104T	100K 1/4W
R1082	ERDS2TJ474T	470K 1/4W
	CAPACITORS	
C1	ECBT1H5R6KC5	5.6P 50V
C1	ECKR1H473ZF5	0.047 50V
C2	ECKR1H473ZF5	0.047 50V
C2	RCBS1H102KBY	1000P 50V
C3	ECBT1H2R2KC5	2.2P 50V
C4	ECBT1H181KB5	180P 50V
C5	ECBT1H5R6KC5	5.6P 50V
C6	ECBT1H3R3KC5	3.3P 50V
C7	ECBT1H4R7KC5	4.7P 50V
C8	ECBT1H3R3KC5	3.3P 50V
C9	ECBT1H2R2KC5	2.2P 50V
C10	ECBT1H180JC5	18P 50V
C11	RCBS1H102KBY	1000P 50V
C101	ECBT1C103NS5	0.01 16V
C103	ECBT1C103NS5	0.01 16V
C104	ECBT1H102KB5	1000P 50V
C105	ECBT1H102KB5	1000P 50V
C106	ECBT1C103NS5	0.01 16V

Ref No.	Part No.	Values & Remarks
C107	ECBT1H473ZF5	0.047 50V
C108	ECBT1H8R2KC5	8.2P 50V
C109	ECBT1C103NS5	0.01 16V
C110	ECBT1C103NS5	0.01 16V
C111	ECEA1EKA4R7B	4.7 25V
C112	ECBT1C103NS5	0.01 16V
C113	ECBT1H102KB5	1000P 50V
C114	ECEA1HKA3R3B	3.3 50V
C115	ECEA1EKA4R7B	4.7 25V
C116	ECBT1C822MS5	8200P 16V
C117	ECQB1H821JF3	820P 50V
C118	ECFR1E183KR	0.018 25V
C119	ECFR1E183KR	0.018 25V
C120	ECEA1HKA010B	1 50V
C121	ECEA1HKA010B	1 50V
C122	ECEA1HKA2R2B	2.2 50V
C123	ECEA1HKA010B	1 50V
C124	ECBT1H102KB5	1000P 50V
C125	ECBT1H150JC5	15P 50V
C126	ECBT1H104ZF5	0.1 50V
C127	ECEA1CKA220B	22 16V
C128	ECBT1C103NS5	0.01 16V
C129	ECEA0JKA101B	100 6.3V
C130	ECEA0JKA101B	100 6.3V
C131	ECBT1C103NS5	0.01 16V
C132	ECBT1H102KB5	1000P 50V
C133	ECBT1H150JC5	15P 50V
C134	ECBT1H180JC5	18P 50V
C137	ECBT1H271KB5	270P 50V
C138	ECBT1H271KB5	270P 50V
C141	ECEA1HKA010B	1 50V
C142	ECEA1HKA010B	1 50V
C143	ECEA1HKA010B	1 50V
C144	ECEA1HKA010B	1 50V
C145	ECBT1H220JC5	22P 50V
C146	ECBT1H331KB5	330P 50V
C147	ECBT1H102KB5	1000P 50V
C148	ECBT1C103NS5	0.01 16V
C149	ECBT1C103NS5	0.01 16V
C150	ECBT1H104ZF5	0.1 50V
C172	ECBT1H331KB5	330P 50V
C173	ECEA1CKA220B	22 16V
C174	ECEA1CKA100B	10 16V
C175	ECBT1C103NS5	0.01 16V
C196	ECBT1H102KB5	1000P 50V
C351	ECEA1CKA220B	22 16V
C352	ECEA1CKA220B	22 16V
C353	ECBT1H470J5	47P 50V

Ref No.	Part No.	Values & Remarks
C354	ECBT1H470J5	47P 50V
C355	ECBT1E103ZF5	0.01 25V
C356	ECBT1E103ZF5	0.01 25V
C357	ECEA0JKA470B	47 6.3V
C358	ECEA0JKA470B	47 6.3V
C359	ECBT1E103ZF5	0.01 25V
C360	ECBT1E103ZF5	0.01 25V
C401	ECEA1VKA4R7B	4.7 10V
C402	ECEA1VKA4R7B	4.7 10V
C403	ECBT1E103ZF5	0.01 25V
C404	ECBT1E103ZF5	0.01 25V
C405	ECBT1H101KB5	100P 50V
C406	ECBT1H101KB5	100P 50V
C409	ECEA1EKA220B	22 25V
C410	ECEA1EKA220B	22 25V
C411	ECBT1H101KB5	100P 50V
C412	ECBT1H101KB5	100P 50V
C413	ECEA1CU100B	10 16V
C414	ECEA1CU100B	10 16V
C415	ECBT1E103ZF5	0.01 25V
C416	ECBT1E103ZF5	0.01 25V
C417	ECBT1H101KB5	100P 50V
C418	ECBT1H101KB5	100P 50V
C419	ECBT1H101KB5	100P 50V
C420	ECBT1H101KB5	100P 50V
C421	ECBT1H101KB5	100P 50V
C422	ECBT1H101KB5	100P 50V
C423	ECBT1H101KB5	100P 50V
C424	ECBT1H101KB5	100P 50V
C425	ECBT1H101KB5	100P 50V
C426	ECBT1H101KB5	100P 50V
C427	ECBT1H101KB5	100P 50V
C428	ECBT1H101KB5	100P 50V
C431	ECEA1CU100B	10 16V
C432	ECEA1CU100B	10 16V
C440	ECBT1E103ZF5	0.01 25V
C451	ECEA1VKA4R7B	4.7 10V
C452	ECEA1VKA4R7B	4.7 10V
C453	ECBT1H101KB5	100P 50V
C454	ECBT1H101KB5	100P 50V
C455	ECBT1H102KB5	1000P 50V
C456	ECBT1H102KB5	1000P 50V
C457	ECEA1AKA330B	33 10V
C458	ECEA1AKA330B	33 10V
C459	ECFR1E223KR	0.022 25V
C460	ECFR1E223KR	0.022 25V
C461	ECFR1E682KR	6800P 25V
C462	ECFR1E682KR	6800P 25V

Ref No.	Part No.	Values & Remarks
C463	ECEA1VKA4R7B	4.7 10V
C464	ECEA1VKA4R7B	4.7 10V
C465	ECBT1E103ZF5	0.01 25V
C466	ECBT1E103ZF5	0.01 25V
C503	ECEA0JKA101B	100 6.3V
C504	ECEA0JKA101B	100 6.3V
C505	ECFR1C104MR	0.1 16V
C506	ECFR1C104MR	0.1 16V
C511	ECEA1HKA3R3B	3.3 50V
C512	ECEA1HKA3R3B	3.3 50V
C513	ECBT1H150J5	15P 50V
C514	ECBT1H150J5	15P 50V
C515	ECBT1H221KB5	220P 50V
C516	ECBT1H221KB5	220P 50V
C517	ECBT1H220J5	22P 50V
C518	ECBT1H220J5	22P 50V
C519	ECEA1VKA4R7B	4.7 10V
C520	ECEA1VKA4R7B	4.7 10V
C521	ECEA1VKA4R7B	4.7 10V
C522	ECEA1VKA4R7B	4.7 10V
C523	ECFR1E123KR	0.012 25V
C524	ECFR1E123KR	0.012 25V
C525	ECQV1H683JZ3	0.068 50V
C526	ECQV1H683JZ3	0.068 50V
C527	ECBT1C562KR5	5600P 16V
C528	ECBT1C562KR5	5600P 16V
C529	ECQB1H273JF3	0.027 50V
C530	ECQB1H273JF3	0.027 50V
C531	ECBT1E103ZF5	0.01 25V
C532	ECBT1E103ZF5	0.01 25V
C533	ECEA1CKA100B	10 16V
C534	ECEA1CKA100B	10 16V
C536	ECBT1E103ZF5	0.01 25V
C537	ECEA1HU3R3B	3.3 50V
C538	ECEA1HU3R3B	3.3 50V
C551	ECEA1HKA3R3B	3.3 50V
C552	ECEA1HKA3R3B	3.3 50V
C553	ECBT1H101KB5	100P 50V
C554	ECBT1H101KB5	100P 50V
C555	ECBT1H221KB5	220P 50V
C556	ECBT1H221KB5	220P 50V
C557	ECBT1E103ZF5	0.01 25V
C558	ECBT1E103ZF5	0.01 25V
C559	ECEA1CKA100B	10 16V
C560	ECEA1CKA100B	10 16V
C563	ECBT1E103ZF5	0.01 25V
C583	ECEA0JKA470B	47 6.3V
C584	ECEA0JKA470B	47 6.3V

Ref No.	Part No.	Values & Remarks
C601	ECEA1HKN3R3B	3.3 50V
C602	ECEA1HKN3R3B	3.3 50V
C603	ECBT1H331KB5	330P 50V
C604	ECBT1H331KB5	330P 50V
C605	ECEA1JU220B	22 63V
C606	ECEA1JU220B	22 63V
C607	ECCR1H100K5	10P 50V
C608	ECCR1H100K5	10P 50V
C609	ECBT1H221KB5	220P 50V
C610	ECBT1H221KB5	220P 50V
C611	ECQV1H473JZ3	0.047 50V
C612	ECQV1H473JZ3	0.047 50V
C613	ECBT1H681KB5	680P 50V
C614	ECBT1H681KB5	680P 50V
C615	ECEA1JU330	33 63V
C616	ECEA2AU100B	10 100V
C617	ECEA1JU220B	22 63V
C618	ECEA2AN2R2SB	2.2 100V
C619	ECBT1H102KB5	1000P 50V
C621	ECEA2AU100B	10 100V
C622	ECEA2AU100B	10 100V
C651	ECEA1HKN3R3B	3.3 50V
C652	ECEA1HKN3R3B	3.3 50V
C653	ECBT1H681KB5	680P 50V
C654	ECBT1H681KB5	680P 50V
C655	ECEA1JU220B	22 63V
C656	ECEA1JU220B	22 63V
C657	ECCR1H100K5	10P 50V
C658	ECCR1H100K5	10P 50V
C659	ECBT1H221KB5	220P 50V
C660	ECBT1H221KB5	220P 50V
C661	ECQV1H473JZ3	0.047 50V
C662	ECQV1H473JZ3	0.047 50V
C663	ECBT1H681KB5	680P 50V
C664	ECBT1H681KB5	680P 50V
C665	ECEA1JU330	33 63V
C666	ECEA2AU100B	10 100V
C667	ECEA1JU220B	22 63V
C668	ECEA2AN2R2SB	2.2 100V
C669	ECBT1H102KB5	1000P 50V
C671	ECEA2AU100B	10 100V
C672	ECEA2AU100B	10 100V
C681	ECEA1HN100SB	10 50V
C682	ECEA1HN100SB	10 50V
C685	ECBT1E103ZF5	0.01 25V
C701	ECBT1E103ZF5	0.01 25V
C702	ECQE2104KF3	0.1 250V
C703	ECES1KV752UX	7500 100V[MAV]

Ref No.	Part No.	Values & Remarks
C704	ECES1KV752UX	7500 100V[MAV]
C705	ECEA1HM332EV	3300P 50V[M]
C706	ECEA1HM332EV	3300P 50V[M]
C707	ECA1VM101B	100 35V
C708	ECKR1H103ZF5	0.01 50V
C709	ECEA1CKA330B	33 16V
C710	ECBT1E103ZF5	0.01 25V
C711	ECKR1H103ZF5	0.01 50V
C712	ECEA1HKA100B	10 50V
C713	ECBT1E103ZF5	0.01 25V
C714	ECEA1EKA470B	47 25V
C715	ECEA1CKA101B	100 16V
C721	ECQE2104KF3	0.1 250V
C751	ECKWNS102MBM	1000P 400V
C752	ECKR1H103ZF5	0.01 50V
C753	ECA1EM102B	1000 25V
C754	ECBT1E103ZF5	0.01 25V
C755	ECEA1CU470B	47 16V
C757	ECEA1CU100B	10 16V
C758	ECEA1AU101B	100 10V
C771	ECEA1HKA2R2B	2.2 50V
C772	ECEA1CU100B	10 16V
C773	ECBT1E223ZF5	0.022 25V
C774	ECEA0JU221B	220 6.3V
C801	ECQV1H104JZ3	0.1 50V
C802	ECQV1H104JZ3	0.1 50V
C803	ECQV1H104JZ3	0.1 50V
C804	ECQV1H104JZ3	0.1 50V
C805	ECEA1CKA100B	10 16V
C806	ECEA1CKA100B	10 16V
C901	ECEA0JU102B	1000 6.3V
C902	ECBT1H104ZF5	0.1 50V
C903	ECBT1E103ZF5	0.01 25V
C904	ECEA0JU102B	1000 6.3V
C906	ECEA0JKA101B	100 6.3V
C908	ECBT1E103ZF5	0.01 25V
C909	ECEA1HKA220B	22 50V
C910	ECEA1HKA220B	22 50V
C911	ECEA1HKA220B	22 50V
C912	ECEA1HKA220B	22 50V
C913	ECEA1VKA100B	10 10V
C914	ECEA1VKA100B	10 10V
C916	ECEA1HKA010B	1 50V
C919	ECBT1H104ZF5	0.1 50V
C920	ECEA1HKA010B	1 50V
C921	ECBT1H331KB5	330P 50V
C922	ECBT1H331KB5	330P 50V
C923	ECBT1H331KB5	330P 50V

Ref No.	Part No.	Values & Remarks
C924	ECBT1H331KB5	330P 50V
C925	ECBT1H331KB5	330P 50V
C926	ECBT1H331KB5	330P 50V
C927	ECBT1H331KB5	330P 50V
C928	ECBT1H331KB5	330P 50V
C929	ECBT1H331KB5	330P 50V
C930	ECBT1H331KB5	330P 50V
C931	ECBT1H102KB5	1000P 50V
C934	ECBT1E103ZF5	0.01 25V
C935	ECBT1E103ZF5	0.01 25V
C938	ECBT1E103ZF5	0.01 25V
C940	ECBT1H102KB5	1000P 50V
C941	ECBT1H102KB5	1000P 50V
C944	ECBT1H101KB5	100P 50V
C948	ECBT1E103ZF5	0.01 25V
C994	ECBT1H101KB5	100P 50V
C1001	ECEA1HKA010B	1 50V
C1002	ECEA1HKA010B	1 50V
C1003	ECEA1HKA3R3B	3.3 50V
C1004	ECEA1HKA3R3B	3.3 50V
C1005	ECEA1HKA010B	1 50V
C1007	ECFR1E223KR	0.022 25V
C1008	ECFR1E473KR	0.047 25V
C1009	ECEA0JU221B	220 6.3V
C1010	ECEA1CKA100B	10 16V
C1011	ECEA1CKA100B	10 16V
C1012	ECEA1CKA100B	10 16V
C1013	ECEA1CKA100B	10 16V
C1014	ECEA0JU221B	220 6.3V
C1015	ECQV1H104JZ3	0.1 50V
C1016	ECQV1H104JZ3	0.1 50V
C1017	ECEA1HKAR47B	0.47 50V
C1018	ECEA1HKA4R7B	4.7 50V
C1019	ECEA1HKAR47B	0.47 50V
C1020	ECEA1HKA4R7B	4.7 50V
C1021	ECEA1HKAR15B	0.15 50V
C1022	ECEA1HKA3R3B	3.3 50V
C1023	ECQV1H154JZ3	0.15 50V
C1024	ECQV1H154JZ3	0.15 50V
C1025	ECEA1HKA3R3B	3.3 50V
C1026	ECEA1HKAR15B	0.15 50V
C1027	ECEA1HKA4R7B	4.7 50V
C1028	ECEA1HKAR47B	0.47 50V
C1029	ECEA1HKA4R7B	4.7 50V
C1030	ECEA1HKAR47B	0.47 50V
C1031	ECQV1H104JZ3	0.1 50V
C1032	ECQV1H104JZ3	0.1 50V
C1033	ECEA0JKA470B	47 6.3V

Ref No.	Part No.	Values & Remarks
C1034	ECQV1H474JZ3	0.47 50V
C1035	ECBT1H681KB5	680P 50V
C1036	ECBT1H101KB5	100P 50V
C1037	ECBT1H101KB5	100P 50V
C1038	ECBT1H101KB5	100P 50V
C1039	ECEA1CU101B	100 16V
C1040	ECEA1CKA100B	10 16V
C1041	ECBT1E103ZF5	0.01 25V
C1043	ECEA1CKA100B	10 16V
C1044	ECEA1CKA100B	10 16V
C1051	ECEA1HKA2R2B	2.2 50V
C1052	ECEA1HKA010B	1 50V
C1053	ECEA1HKA3R3B	3.3 50V
C1054	ECEA0JU221B	220 6.3V
C1055	ECEA1HKA010B	1 50V
C1056	ECFR1E563KR	0.056 25V
C1057	ECFR1E152KR	1500P 25V
C1058	ECFR1E563KR	0.056 25V
C1059	ECEA1CKA101B	100 16V
C1060	ECBT1E223ZF5	0.022 25V
C1062	ECBT1E223ZF5	0.022 25V
C1063	ECEA1CKA101B	100 16V
C1064	ECEA1HKA010B	1 50V
C1065	ECBT1H681KB5	680P 50V
C1067	ECBT1C152KR5	1500P 16V
C1068	ECBT1C152KR5	1500P 16V
C1081	ECEA1HKA010B	1 50V
C1082	ECBT1E223ZF5	0.022 25V

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